What’s New

Memorial Sloan Kettering Cancer Center (MSK) possesses an extensive collection of tangible research materials, which are available for licensing for research or commercial purposes. These materials are managed by MSK’s Office of Technology Development.

With this 4th Edition of its *Tangible Materials Licensing Catalogue*, MSK offers a comprehensive and expanded selection of about 20 categories of cell lines derived from cancer patients, including melanoma, renal cancer, neuroblastoma, and lung cancer. Many of these materials have not been previously publicized for licensing purposes.

MSK’s *Tangible Materials Licensing Catalogue* also includes a range of antibodies, mouse models, and PDX models. Together with the rest of the portfolio described in this catalogue, they offer promising potential for commercial entities and academic-research institutions alike.

This 4th Edition of MSK’s *Tangible Materials Licensing Catalogue* is new and different in another important respect. We have expanded express licensing options to now cover most of the cell lines included in our catalogue. As you’ll see in the pages that follow, express licensing information is linked directly to our marketing sheets; these licenses can be filled out and submitted to MSK online.

MSK’s non-exclusive, non-negotiable express licenses save time and effort for our tangible materials licensing partners. All transactions up to $10,000 will be paid for by credit card; MSK will invoice customers for larger transactions. All tangible materials listed in this catalogue are subject to change in availability, pricing, and license contracts.

This is all part of our effort to make the process of tangible material licensing as quick and user-friendly as possible. We will periodically publish new and expanded editions of MSK’s *Tangible Materials Licensing Catalogue*. Meanwhile, to view a list of other MSK technologies available for licensing, including therapeutics, diagnostics, vaccines, medical devices, and digital health innovation, please see [here](#).

**Licensing Information:** Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. **MSK Office of Technology Development Contact for more information:** TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
# Table of Contents

## Cell Line Licensing at MSK

### ANTIBODIES

- **Anti-CD45.1** Mouse Monoclonal Antibody (Clone A-20) ........................................... 9  
- **Anti-CD45.2** Mouse Monoclonal Antibody (Clone 104-2) ................................. 9  
- **Anti-NK1.1** Mouse Monoclonal Antibody (Clone PK136) ............................... 10  
- **Anti-TRP1** Mouse Monoclonal Antibody (Clone TA99) ............................... 10  
- **Anti-Mre-11** Hamster Monoclonal Antibody (Clone 15B8.1E7.6) ............... 11

### CELL LINES

#### Brain & Nervous System

- **SH-SY5Y.** Human Neuroblastoma Cell Line (ATCC Catalogue No. CRL-2266) ....... 13  
- **SK-MG-01.** Human Brain Astrocytoma Cell Line .............................................. 13  
- **SK-MG-02.** Human Brain Astrocytoma Cell Line .............................................. 14  
- **SK-MG-03.** Human Brain Astrocytoma Cell Line .............................................. 14  
- **SK-MG-04.** Human Brain Astrocytoma Cell Line .............................................. 15  
- **SK-MG-05.** Human Brain Astrocytoma Cell Line .............................................. 15  
- **SK-MG-06.** Human Brain Astrocytoma Cell Line .............................................. 16  
- **SK-MG-07.** Human Brain Astrocytoma Cell Line .............................................. 16  
- **SK-MG-08.** Human Brain Astrocytoma Cell Line .............................................. 17  
- **SK-MG-09.** Human Brain Astrocytoma Cell Line .............................................. 17  
- **SK-MG-10.** Human Brain Astrocytoma Cell Line .............................................. 18  
- **SK-N-BE(2).** Human Neuroblastoma Cell Line (ATCC Catalogue No. CRL-2271) .... 18  
- **SK-N-BE(2)-C.** Human Neuroblastoma Cell Line (ATCC Catalogue No. CRL-2268) .... 19  
- **SK-N-MC.** Human Neuroblastoma Cell Line (ATCC Catalogue No. HTB-10) .......... 19  
- **SK-N-SH.** Human Neuroblastoma Cell Line (ATCC Catalogue No. HTB-11) ........ 20  
- **TS543.** Human Glioblastoma Cell Line .......................................................... 20  
- **TS600.** Human Glioblastoma Cell Line .......................................................... 21  
- **TS603.** Human Glioblastoma Cell Line .......................................................... 21  
- **TS676.** Human Glioblastoma Cell Line .......................................................... 22

#### Breast Cancer

- **CAMA-1.** Human Breast Cancer Cell Line (ATCC Catalogue No. HTB-21) .......... 24  
- **SK-BR-3.** Human Breast Cancer Cell Line (ATCC Catalogue No. HTB-30) .......... 24  
- **SK-BR-5.** Human Breast Cancer Cell Line (aka SK-BR-05) ............................ 25  
- **SK-BR-7.** Human Breast Cancer Cell Line (aka SK-BR-07) ............................ 25  
- **SK-1041.** Organ-Tropic Metastatic Breast Cancer Cell Line Portfolio ............... 26  
- **MDA-231-AdM-1834.** Human Breast Adenocarcinoma Cell Line ....................... 27  
- **MDA-231-BoM-1833.** Human Breast Adenocarcinoma Cell Line ....................... 27  
- **MDA-231-BoM-2287.** Human Breast Adenocarcinoma Cell Line ....................... 28  
- **MDA-231-BrM2-831.** Human Breast Adenocarcinoma Cell Line ....................... 28  
- **MDA-231-LM2-4175.** Human Breast Adenocarcinoma Cell Line ....................... 29  
- **MDA-MB-231 TGL.** Human Breast Adenocarcinoma Cell Line ....................... 29

#### Cervical Cancer

- **HT-3.** Human Cervical Cancer Cell Line (ATCC Catalogue No. HTB-32) .......... 31

#### Colorectal Cancer

- **HT-29.** Human Colorectal Adenocarcinoma Cell Line (ATCC Catalogue No. HTB-38) .......................................................... 33  
- **SK-CO-1.** Human Colorectal Adenocarcinoma Cell Line (ATCC Catalogue No. HTB-39) .......................................................... 33  
- **SK-CO-10.** Human Colon Carcinoma Cell Line .............................................. 34  
- **SK-CO-15.** Human Colon Carcinoma Cell Line .............................................. 34

#### Esophageal Cancer

- **SK-GT-4.** Human Esophageal Adenocarcinoma Cell Line, Primary (aka SK-GT-04) .......................................................... 36  
- **SK-NEP-1.** Human Esophageal Adenocarcinoma Cell Line, Metastatic (aka SK-NEP-01) .......................................................... 36

#### Head & Neck Cancer

- **MSK-921.** Human Head & Neck Squamous Cell Line .................................... 38  
- **MSK-Leuk1.** Human Oral Leukoplakia Cell Line ............................................ 38

---

**Licensing Information:** Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
Liver Cancer
SK-HEP-1. Human Hepatic Adenocarcinoma Cell Line (ATCC Catalogue No. HTB-52) ........................................................ 40

Lung Cancer
Calu-1. Human Lung Squamous Cell Carcinoma Cell Line (aka Calu-01) . .42
Calu-3. Human Lung Adenocarcinoma Cell Line, Metastatic (aka Calu-03) .42
Calu-5. Human Lung Adenocarcinoma Cell Line (aka Calu-05) ........ 43
Calu-6. Human Lung Anaplastic Carcinoma Cell Line (aka Calu-06) ........ 43
SK-LC-01. Human Lung Adenocarcinoma Cell Line ..................... 44
SK-LC-02. Human Lung Adenocarcinoma Cell Line ..................... 44
SK-LC-04. Human Lung Adenocarcinoma Cell Line ..................... 45
SK-LC-05. Human Lung Large Cell Carcinoma Cell Line .................. 45
SK-LC-06. Human Lung Large Cell Anaplastic Carcinoma Cell Line ...... 46
SK-LC-07. Human Lung Adenocarcinoma Cell Line ................. 46
SK-LC-08. Human Lung Squamous Cell Line ......................... 47
SK-LC-09. Human Lung Adenocarcinoma Cell Line ..................... 47
SK-LC-10. Human Lung Adenocarcinoma Cell Line ............... 48
SK-LC-11. Human Lung Adenocarcinoma Cell Line ............... 48
SK-LC-12. Human Lung Adenocarcinoma Cell Line ............... 49
SK-LC-13. Human Lung Small Cell Carcinoma Cell Line ........... 49
SK-LC-14. Human Lung Squamous Cell Carcinoma Cell Line, Primary . 50
SK-LC-15. Human Lung Adenocarcinoma Cell Line, Primary ........ 50
SK-LC-16. Human Lung Adenocarcinoma Cell Line, Primary ........ 51
SK-LC-17. Human Lung Anaplastic Carcinoma Cell Line, Primary ...... 51
SK-LC-19. Human Lung Adenocarcinoma Cell Line ..................... 52
SK-LC-21. Human Lung Adenocarcinoma Cell Line ..................... 52
SK-LU-1. Human Lung Adenocarcinoma Cell Line, Primary (aka SK-LU-01, ATCC Catalogue No. HTB-57) .......................... 53
SK-MES-1. Human Lung Cancer Cell Line (ATCC Catalogue No. HTB-58) . .53

Lymphoma
SK-LY-16. Human Lymphoma Cell Line ...................................... 55

Melanoma
HT-144. Human Melanoma Cell Line (ATCC Catalogue No. HTB-63) .... 57
Malme-3M. Human Melanoma Cell Line (ATCC Catalogue No. HTB-64) .. 57
SK-MEL-1. Human Melanoma Cell Line (ATCC Catalogue No. HTB-67) .. 58
SK-MEL-2. Human Melanoma Cell Line (ATCC Catalogue No. HTB-68) .. 58
SK-MEL-3. Human Melanoma Cell Line (ATCC Catalogue No. HTB-69) .. 59
SK-MEL-5. Human Melanoma Cell Line (ATCC Catalogue No. HTB-70) .. 59
SK-MEL-24. Human Melanoma Cell Line (ATCC Catalogue No. HTB-71) ..60
SK-MEL-26. Human Melanoma Cell Line ..................................... 60
SK-MEL-29. Human Melanoma Cell Line ..................................... 61
SK-MEL-30. Human Melanoma Cell Line ..................................... 62
SK-MEL-31. Human Melanoma Cell Line (ATCC Catalogue No. HTB-73) .. 62

Multiple Myeloma
SK-MM-1. Human Multiple Myeloma Cell Line (aka SK-MM-01) ........ 64
SK-MM-2. Human Multiple Myeloma Cell Line (aka SK-MM-02) ........ 64

Ovarian Cancer
Caov-3. Human Ovarian Cancer Cell Line (ATCC Catalogue No. HTB-75) . .66
Caov-4. Human Ovarian Cancer Cell Line (ATCC Catalogue No. HTB-76) .66
SK-OV-1. Human Ovarian Adenocarcinoma Cell Line (aka SK-OV-01) .... 67
SK-OV-3. Human Ovarian Cancer Cell Line (ATCC Catalogue No. HTB-77) . .67
SK-OV-8. Human Ovarian Adenocarcinoma Cell Line (aka SK-OV-08) ..... 68

Pancreatic Cancer
Capan-1. Human Pancreatic Adenocarcinoma Cell Line (ATCC Catalogue No. HTB-79) .................................................. 70
Capan-2. Human Pancreatic Adenocarcinoma Cell Line (ATCC Catalogue No. HTB-80) .................................................. 70

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
<table>
<thead>
<tr>
<th>Cell Line</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caki-1</td>
<td>Human Renal Cancer Cell Line (ATCC Catalogue No. HTB-46)</td>
</tr>
<tr>
<td>Caki-2</td>
<td>Human Renal Cancer Cell Line (ATCC Catalogue No. HTB-47)</td>
</tr>
<tr>
<td>SK-RC-1</td>
<td>Human Renal Carcinoma Cell Line, Primary (aka SK-RC-01)</td>
</tr>
<tr>
<td>SK-RC-2</td>
<td>Human Renal Adenocarcinoma Cell Line, Primary (aka SK-RC-02)</td>
</tr>
<tr>
<td>SK-RC-4</td>
<td>Human Renal Cancer Cell Line, Primary (aka SK-RC-04)</td>
</tr>
<tr>
<td>XSK-RC-6</td>
<td>Human Renal Adenocarcinoma Cell Line, Primary (aka SK-RC-06)</td>
</tr>
<tr>
<td>SK-RC-7</td>
<td>Human Renal Clear Cell Carcinoma Cell Line, Primary (aka SK-RC-07)</td>
</tr>
<tr>
<td>SK-RC-8</td>
<td>Human Renal Clear Cell Carcinoma Cell Line, Primary (aka SK-RC-08)</td>
</tr>
<tr>
<td>SK-RC-9</td>
<td>Human Renal Carcinoma Cell Line, Metastatic (aka SK-RC-09)</td>
</tr>
<tr>
<td>SK-RC-10</td>
<td>Human Renal Cancer Cell Line, Primary</td>
</tr>
<tr>
<td>SK-RC-11</td>
<td>Human Renal Cancer Cell Line, Primary</td>
</tr>
<tr>
<td>SK-RC-12</td>
<td>Human Renal Clear Cell, Cortical Carcinoma Cell Line, Primary</td>
</tr>
<tr>
<td>SK-RC-13</td>
<td>Human Renal Cancer Cell Line, Metastatic</td>
</tr>
<tr>
<td>SK-RC-14</td>
<td>Human Renal Cancer Cell Line, Primary</td>
</tr>
<tr>
<td>SK-RC-15</td>
<td>Human Renal Clear Cell, Cortical Carcinoma Cell Line, Primary</td>
</tr>
<tr>
<td>SK-RC-16</td>
<td>Human Renal Cancer Cell Line, Primary</td>
</tr>
<tr>
<td>SK-RC-17</td>
<td>Human Renal Cancer Cell Line, Metastatic</td>
</tr>
<tr>
<td>SK-RC-18</td>
<td>Human Renal Clear Cell Carcinoma Cell Line, Metastatic</td>
</tr>
<tr>
<td>SK-RC-19</td>
<td>Human Renal Cancer Cell Line, Primary</td>
</tr>
<tr>
<td>SK-RC-20</td>
<td>Human Renal Cancer Cell Line, Primary</td>
</tr>
<tr>
<td>SK-RC-21</td>
<td>Human Renal Cancer Cell Line, Metastatic</td>
</tr>
<tr>
<td>SK-RC-22</td>
<td>Human Renal Cancer Cell Line, Primary</td>
</tr>
<tr>
<td>SK-RC-23</td>
<td>Human Renal Cancer Cell Line, Primary</td>
</tr>
<tr>
<td>SK-RC-25</td>
<td>Human Renal Cancer Cell Line, Primary</td>
</tr>
<tr>
<td>SK-RC-26</td>
<td>Human Renal Cancer Cell Line, Primary</td>
</tr>
<tr>
<td>SK-RC-26a</td>
<td>Human Renal Cancer Cell Line, Metastatic</td>
</tr>
<tr>
<td>SK-RC-26b</td>
<td>Human Renal Cancer Cell Line, Metastatic</td>
</tr>
<tr>
<td>SK-RC-28</td>
<td>Human Renal Clear Cell Adenocarcinoma Cell Line, Primary</td>
</tr>
<tr>
<td>SK-RC-30</td>
<td>Human Renal Cancer Cell Line, Primary</td>
</tr>
<tr>
<td>SK-RC-31</td>
<td>Human Renal Cancer Cell Line, Metastatic</td>
</tr>
<tr>
<td>SK-RC-34</td>
<td>Human Renal Cancer Cell Line, Primary</td>
</tr>
<tr>
<td>SK-RC-36</td>
<td>Human Renal Cancer Cell Line, Metastatic</td>
</tr>
<tr>
<td>SK-RC-37</td>
<td>Human Renal Cancer Cell Line, Primary</td>
</tr>
<tr>
<td>SK-RC-38</td>
<td>Human Renal Clear Cell Carcinoma Cell Line, Metastatic</td>
</tr>
<tr>
<td>SK-RC-45</td>
<td>Human Renal Cancer Cell Line, Metastatic</td>
</tr>
<tr>
<td>SK-RC-48</td>
<td>Human Renal Cancer Cell Line, Primary</td>
</tr>
<tr>
<td>SK-RC-52</td>
<td>Human Renal Cancer Cell Line, Metastatic</td>
</tr>
<tr>
<td>SK-RC-54</td>
<td>Human Renal Adenocarcinoma Cell Line, Metastatic</td>
</tr>
<tr>
<td>SK-RC-56</td>
<td>Human Renal Cancer Cell Line, Primary</td>
</tr>
<tr>
<td>SK-RC-61</td>
<td>Human Renal Cancer Cell Line, Primary</td>
</tr>
<tr>
<td>SK-RC-(M)</td>
<td>Metastatic Human Renal Cell Carcinoma (RCC) Cell Line Portfolio</td>
</tr>
<tr>
<td>SK-RC-(P)</td>
<td>Primary Human Renal Cell Carcinoma (RCC) Cell Line Portfolio</td>
</tr>
<tr>
<td>Saos-2</td>
<td>Human Osteosarcoma Cell Line (ATCC Catalogue No. HTB-85)</td>
</tr>
<tr>
<td>SK-ES-1</td>
<td>Human Ewing Sarcoma Cell Line (aka SK-ES-01)</td>
</tr>
<tr>
<td>SK-UT-1</td>
<td>Human Uterine Leiomyosarcoma Cell Line (aka SK-UT-01)</td>
</tr>
<tr>
<td>SK-UT-1B</td>
<td>Human Uterine Leiomyosarcoma Cell Line (ATCC Catalogue No. HTB-106)</td>
</tr>
<tr>
<td>HTB-106</td>
<td>Human Carcinoma Cell Line Derived from a Lung Metastatic Site (ATCC Catalogue No. HTB-106)</td>
</tr>
<tr>
<td>SK-UT-02</td>
<td>Human Endometrial Carcinoma Cell Line</td>
</tr>
<tr>
<td>SK-LMS-01</td>
<td>Human Vulva Cancer – Vulvar Leiomyosarcoma Cell Line (ATCC Catalogue No. HTB-88)</td>
</tr>
</tbody>
</table>

**Renal Cancer**

**Sarcoma**

**Teratomas**

**Uterine Cancer**

**Vulva**

** Licensing Information:** Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
MOUSE MODELS

SK1040. The Ef-Luc Mouse .................................................................113
SK2011-042. Conditional ASXL1 Knock-out Mouse Model ..............114
SK2011-043. Conditional BAP1 Knock-out Mouse Model ..................114
SK2011-047. MAD2 Overexpressing Mice .........................................115

PDX MODELS

MSK-LX29 (Adenocarcinoma) .........................................................117
MSK-LX40 (Small Cell Lung Cancer) ..............................................117
MSK-LX40-R (Small Cell Lung Cancer) ..........................................117
MSK-LX55 (Adenocarcinoma) ..........................................................117
MSK-LX95 (Small Cell Lung Cancer) ..............................................118
MSK-LX95-R (Small Cell Lung Cancer) ..........................................118
MSK-LX285 (Adenocarcinoma) ........................................................118

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK's tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
Cell Line Licensing at MSK

When licensing materials from the MSK Cell Line portfolio, note that these may be provided to our licensing partners by either ATCC or an MSK core facility, depending upon the particular cell line. Pricing, availability, and license contracts are subject to change.

Most of MSK's cell lines may be licensed through one of our non-negotiable, non-exclusive express licenses.

- **If ATCC** will provide the cell line: Commercial or other for-profit entities should start the process by filling out the ATCC Express License, and then providing it in fully executed form to ATCC. See [here](#) for links to the online fillable webform and PDF version of the ATCC Express License.

- **If MSK's Antibody & Bioresource Core Facility** will provide the cell line: Commercial or other for-profit entities should start by filling out the Core Express License. See [here](#) for links to the online fillable webform and PDF version of the Core Express License.

- **With all other cell lines (as well as other tangible materials):** Contact the Tangible Materials Licensing team at TRMOTDRTM@mskcc.org.

**For detailed guidance** on how to fill out MSK's express licenses for cell lines, see [here](#).

With questions about our extensive Tangible Materials portfolio, or to license a product that is not covered by an MSK Express License, please contact the Tangible Materials Licensing team at TRMOTDRTM@mskcc.org.

---

**Licensing Information:** Corporations and other for-profit entities may nonexclusively license Memorial Sloan Kettering’s tangible materials for research or commercial purposes.
Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
Antibodies

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK's tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
**Anti-CD45.1 Mouse Monoclonal Antibody (Clone A-20)**

**Antigen:** Mouse CD45.1 (Ly5.1)

**Clone Name:** A-20

**Isotype:** Mouse IgG2a (Kappa Light Chain)

**Application(s):** Flow Cytometry, Immunofluorescence Microscopy, Immunoprecipitation

**Reactivity:** Mouse

*As reported in the literature and other commercial supplier websites

**Description**

Clone A-20 reacts with CD45 (Leukocyte Common Antigen) on leukocytes of mouse strains that express the CD45.1 alloantigen (e.g., RIII, SJL/J, STS/A, DA). It has been reported not to react with leukocytes from mouse strains expressing the CD45.2 alloantigen.

**Source**

This antibody was derived in 1981 by injection of thymocytes and splenocytes from SJL mice into A.SW mice. Splenocytes from these A.SW mice were fused with NS-1 cells to generate hybridomas.

**Inventors**

- Edward Boyse, MD, formerly of Memorial Sloan Kettering
- Fung-Win Shen, PhD

**Key References**


**MSK Tracking Code:** SK2003-077

---

**Anti-CD45.2 Mouse Monoclonal Antibody (Clone 104-2)**

**Antigen:** Mouse CD45.2 (Ly5.2)

**Clone Name:** 104-2

**Isotype:** Mouse IgG2a (Kappa Light Chain)

**Application(s):** Flow Cytometry, Immunofluorescence Microscopy, Immunoprecipitation

**Reactivity:** Mouse

*As reported in the literature and other commercial supplier websites

**Description**

Clone 104-2 reacts with CD45 (Leukocyte Common Antigen) on leukocytes of mouse strains that express the CD45.2 alloantigen, including A, AKR, BALB/c, CBA/Ca, CBA/J, C3H/He, C57BL, C57BR, C57L, C58, DBA/1, DBA/2, NZB, SWR, and 129. It has been reported not to react with leukocytes from mouse strains expressing the CD45.1 alloantigen.

**Source**

This antibody was derived in 1981 by injection of thymocytes and splenocytes from B10.S mice into SJL mice. Splenocytes from these SJL mice were fused with NS-1 cells to generate hybridomas.

**Inventors**

- Edward Boyse, MD, formerly of MSK
- Fung-Win Shen, PhD

**Key References**


**MSK Tracking Code:** SK2003-077

---

**Licensing Information:** Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. For more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
**Anti-NK1.1 Mouse Monoclonal Antibody (Clone PK136)**

**Antigen:** Mouse NK1.1 (CD161, NKR-P1C, Ly-55)

**Clone Name:** PK136

**Isotype:** Mouse IgG2a (Kappa Light Chain)

**Application(s)**: Flow Cytometry, Immunoprecipitation, Immunohistochemistry, Immunofluorescence

**Reactivity**: Mouse

*As reported in the literature and other commercial supplier websites

**Description**

Clone PK136 recognizes mouse NK1.1, a cell surface antigen expressed by natural killer cells and a subset of T cells in the NK1.1 mouse strains including CE, C57BL/6, FVB/N, and NZB. NK1.1 is not expressed by NK cells from the following mouse strains: 129, A, AKR, BALB/c, C3H, CBA, and SJL.

**Source**

This antibody was derived in 1984 by injection of splenocytes (enriched for NK-1-positive cells) and bone marrow cells from CE mice into (C3H x BALB/c) F1 mice. Splenocytes from these mice were then fused with Sp2/0-Ag14 cells to generate hybridomas.

**Inventors**

- Gloria C. Koo, PhD, formerly at Memorial Sloan Kettering
- JoAnne R. Peppard, formerly at Memorial Sloan Kettering

**Key References**

- Reichlin A and Yokoyama WM (1998) Natural killer cell proliferation induced by anti-NK1.1 and IL-2. *Immunology and Cell Biology* 76: 143-152. PMID: 9619484
- Kung SK et al. (1999) The NKR-P1B gene product is an inhibitory receptor on SJL/J NK cells. *Journal of Immunology* 162: 5876-5887. PMID: 10229823

**MSK Tracking Code:** SK 787

---

**Anti-TRP1 Mouse Monoclonal Antibody (Clone TA99)**

**Antigen:** Human TRP1 (TYRP1, PAA, gp75)

**Clone Name:** TA99

**Isotype:** Mouse IgG2a

**Application(s):** Immunocytochemistry, Immunohistochemistry, Immunoprecipitation, Western Blot

**Reactivity**: Mouse, Human

*As reported in the literature and other commercial supplier websites

**Description**

Clone TA99 is a mouse monoclonal antibody that reacts with tyrosinase-related protein 1 (TRP1), a 75kDa differentiation-related human glycoprotein (gp75), formerly referred to as pigmentation-associated antigen (PAA). It is expressed by pigmented melanoma cells and cultured melanocytes. TRP1 is involved in the pigmentation machinery of melanocytes and can be used as a differentiation marker.

**Source**

This antibody was derived in 1985 by injection of whole human melanoma cells (SK-MEL-23) into mice. Splenocytes from these immunized mice were fused with NS-1 cells to generate hybridomas producing anti-TRP1 antibodies.

**Inventors**

- Francisco X. Real, MD, PhD, formerly at Memorial Sloan Kettering
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, Memorial Sloan Kettering; former Director, New York Branch, Ludwig Institute for Cancer Research
- Timothy M. Thomson, MD, PhD

**Key References**


**MSK Tracking Code:** SK 413

---

**Licensing Information:** Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
**Anti-Mre-11 Hamster Monoclonal Antibody (Clone 15B8.1E7.6)**

**Antigen:** Mouse Mre11  
**Clone Name:** 15B8.1E7.6  
**Isotype:** Armenian Hamster IgG  
**Application:** Western Blot  
**Reactivity:** Mouse, Human  

*As reported in the literature and other commercial supplier websites*

**Description**

Armenian hamster hybridoma clone 15B8.1E7.6 produces antibodies directed against mMre11. Mre11 is a component of the Mre11 complex, which plays a central role in double-strand break (DSB) repair, DNA recombination, DNA damage signaling through ATM, maintenance of telomere integrity, and meiosis.

**Source**

Raised against a GST-tagged mMre11 peptide (aa68–608) in Armenian hamster.

**Inventors**

- MSK Antibody and Bioresource Core Facility, MSK  
- John Petrini, PhD, Laboratory Head, Molecular Biology Program, MSK

---

**Licensing Information:** Corporations and other for-profit entities may nonexclusively license MSK's tangible materials for research or certain commercial purposes.  
**MSK Office of Technology Development Contact for more information:** TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
CELL LINES

Brain & Nervous System

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
SH-SY5Y: Human Neuroblastoma Cell Line  
(ATCC Catalogue No. CRL-2266)

Description
SH-SY5Y is a twice-subcloned cell line derived from the SK-N-SH neuroblastoma cell line. It serves as a model for neurodegenerative disorders since the cells can be converted to various types of functional neurons by the addition of specific compounds. In addition, the SH-SY5Y cell line has been used widely in experimental neurological studies, including analysis of neuronal differentiation, metabolism, and function related to neurodegenerative processes, neurotoxicity, and neuroprotection.

Source
This cell line was derived from the SH-SY subclone of the parental SK-N-SH human neuroblastoma cell line. The parental SK-N-SH cell line was established in 1970 from metastatic cells found in the bone marrow aspirate of a four-year-old female of unknown ethnicity.

Inventors
• June L. Biedler, PhD, former Chairman, Cell Biology and Genetics Program, Sloan Kettering Institute, MSK
• Barbara A. Spengler, formerly at Sloan Kettering Institute, MSK

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

MSK Tracking Code: SK 810

SK-MG-01: Human Brain Astrocytoma Cell Line

Description
SK-MG-01 is a human brain cancer cell line.

Source
This cell line was established from a person with astrocytoma.

Lead Researcher/Research Laboratory
• Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s ATCC Express License; see here for links to the online fillable ATCC Express License, as well as a PDF version. Please note: After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Materials team at TRMOTDRTM@mskcc.org.

MSK Tracking Code: SK 810
SK-MG-02: Human Brain Astrocytoma Cell Line

Description
SK-MG-02 is a human brain cancer cell line.

Source
This cell line was established from a person with astrocytoma.

Lead Researcher/Research Laboratory
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions:
Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

SK-MG-03: Human Brain Astrocytoma Cell Line

Description
SK-MG-03 is a human brain cancer cell line.

Source
This cell line was established from a person with astrocytoma.

Lead Researcher/Research Laboratory
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions:
Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.
SK-MG-04: Human Brain Astrocytoma Cell Line

Description
SK-MG-04 is a human brain cancer cell line.

Source
This cell line was established from a person with astrocytoma.

Lead Researcher/Research Laboratory
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

SK-MG-05: Human Brain Astrocytoma Cell Line

Description
SK-MG-05 is a human brain cancer cell line.

Source
This cell line was established from a person with astrocytoma.

Lead Researcher/Research Laboratory
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.
**SK-MG-06: Human Brain Astrocytoma Cell Line**

**Description**
SK-MG-06 is a human brain cancer cell line.

**Source**
This cell line was established from a person with astrocytoma.

**Lead Researcher/Research Laboratory**
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

**Key References**

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

**For non-licensing requests from academic-research institutions:** Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

**SK-MG-07: Human Brain Astrocytoma Cell Line**

**Description**
SK-MG-07 is a human brain cancer cell line.

**Source**
This cell line was established from a person with astrocytoma.

**Lead Researcher/Research Laboratory**
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

**Key References**

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

**For non-licensing requests from academic-research institutions:** Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.
SK-MG-08: Human Brain Astrocytoma Cell Line

Description
SK-MG-08 is a human brain cancer cell line.

Source
This cell line was established from a person with astrocytoma.

Lead Researcher/Research Laboratory
• Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

SK-MG-09: Human Brain Astrocytoma Cell Line

Description
SK-MG-09 is a human brain cancer cell line.

Source
This cell line was established from a person with astrocytoma.

Lead Researcher/Research Laboratory
• Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.
SK-MG-10: Human Brain Astrocytoma Cell Line

Description
SK-MG-10 is a human brain cancer cell line.

Source
This cell line was established from a person with astrocytoma.

Lead Researcher/Research Laboratory
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK's Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

SK-N-BE(2): Human Neuroblastoma Cell Line

(ATCC Catalogue No. CRL-2271)

Description
SK-N-BE(2) is a neuroblastoma cell line that displays MYCN amplification. These cells have moderate dopamine-b-hydroxylase activity and low-choline acetyltransferase activity. The SK-N-BE(2) cells are known to form tumors in immunocompromised mice.

Source
This cell line was established in 1972 from a metastatic site (bone marrow) in a two-year-old Caucasian male with malignant neuroblastoma.

Inventors
- June L. Biedler, PhD, former Chairman, Cell Biology and Genetics Program, Sloan Kettering Institute, MSK
- Barbara A. Spengler, formerly at Sloan Kettering Institute, MSK

Key References
- Veas-Perez De Tudela M et al. (2010) Human neuroblastoma cells with MYCN amplification are selectively resistant to oxidative stress by transcriptionally up-regulating glutamate cysteine ligase. Journal of Neurochemistry 113: 819-825. PMID: 20180881

Licensing Information
Express License: For internal research purposes by a for-profit entity: 1) Fill out MSK’s ATCC Express License; see here for links to the online fillable ATCC Express License, as well as a PDF version. 2) After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Materials team at TRMOTDRTM@mskcc.org.

MSK Tracking Code: SK1980-530
**SK-N-BE(2)-C: Human Neuroblastoma Cell Line**

*(ATCC Catalogue No. CRL-2268)*

**Description**

SK-N-BE(2)-C is a clonal subline of the SK-N-BE(2) neuroblastoma cell line. Like the parental cell line, these cells display MYCN amplification. Treatment with trans-retinoic acid differentiates these cells into a distinct neuronal phenotype. These cells display high levels of tyrosine hydroxylase activity and dopamine-b-hydroxylase activity.

**Source**

This cell line is a subclone of the SK-N-BE(2) neuroblastoma cell line. The parental cell line was established in 1972 from a metastatic site (bone marrow) in a two-year-old Caucasian male with malignant neuroblastoma.

**Inventors**

- June L. Biedler, PhD, former Chairman, Cell Biology and Genetics Program, Sloan Kettering Institute, MSK
- Barbara A. Spengler, formerly at Sloan Kettering Institute, MSK

**Key References**


**Licensing Information**

**Express License:** For internal research purposes by a for-profit entity: Fill out MSK's Express License [here](https://www.mskcc.org/cancer-information/clinical-trials-and-research/express-licenses). After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed instructions about how to fill in this contract, see [here](https://www.mskcc.org/cancer-information/clinical-trials-and-research/express-licenses). In order to streamline and expedite for internal research purposes by a for-profit entity: 1) Fill out MSK's ATCC Express License; see [here](https://www.mskcc.org/cancer-information/clinical-trials-and-research/express-licenses) for links to the online fillable ATCC Express License, as well as a PDF version. 2) After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see [here](https://www.mskcc.org/cancer-information/clinical-trials-and-research/express-licenses). Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK's Tangible Materials team at [TRMOTDRTM@mskcc.org](mailto:TRMOTDRTM@mskcc.org).

**MSK Tracking Code:** SK1980-532

---

**SK-N-MC: Human Neuroblastoma Cell Line**

*(ATCC Catalogue No. HTB-10)*

**Description**

SK-N-MC was originally described as a neuroblastoma cell line. It is now widely regarded as having originated from an Askin's tumor (Ewing family of tumors). These cells harbor the oncogenic EWS-FLI1 chromosomal rearrangement. They were initially found to contain double-minute chromosomes, which were lost upon prolonged *in vitro* culture. The SK-N-MC cells have little or no dopamine-b-hydroxylase activity but show elevated choline acetyltransferase activity compared to other neuroblastoma cell lines such as the SK-N-SH and SH-SY5Y. These cells are known to form tumors in immunocompromised mice.

**Source**

This cell line was established in 1971 from a metastatic site (supra-orbital region) in a 14-year-old Caucasian female with an Askin’s tumor.

**Inventors**

- June L. Biedler, PhD, former Chairman, Cell Biology and Genetics Program, Sloan Kettering Institute, MSK
- Lawrence Helson, MD, formerly at MSK
- Barbara A. Spengler, formerly at Sloan Kettering Institute, MSK

**Key References**

- Biedler JL et al. (1973) Morphology and growth, tumorigenicity, and cytogenetics of human neuroblastoma cells in continuous culture. *Cancer Research* 33: 2643-2652. PMID: [4748425](https://doi.org/10.1158/0008-5472.CAN-73-1035)
- Helson L et al. (1975) Human neuroblastoma in nude mice. *Cancer Research* 35: 2594-2599. PMID: [167965](https://doi.org/10.1158/0008-5472.CAN-75-1531)
- Biedler JL et al. (1978) Multiple neurotransmitter synthesis by human neuroblastoma cell lines and clones. *Cancer Research* 38: 3751-3757. PMID: [29704](https://doi.org/10.1158/0008-5472.CAN-77-0684)

**Licensing Information**

**Express License:** For internal research purposes by a for-profit entity: 1) Fill out MSK's ATCC Express License; see [here](https://www.mskcc.org/cancer-information/clinical-trials-and-research/express-licenses) for links to the online fillable ATCC Express License, as well as a PDF version. 2) After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see [here](https://www.mskcc.org/cancer-information/clinical-trials-and-research/express-licenses). Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK's Tangible Materials team at [TRMOTDRTM@mskcc.org](mailto:TRMOTDRTM@mskcc.org).

**MSK Tracking Code:** SK 776

---

**Licensing Information:** Corporations and other for-profit entities may nonexclusively license MSK's tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
SK-N-SH: Human Neuroblastoma Cell Line (ATCC Catalogue No. HTB-11)

Description
SK-N-SH is a neuroblastoma cell line that displays epithelial morphology and grows in adherent culture. Treatment with all-trans-retinoic acid causes these cells to differentiate and adopt a neuronal phenotype, characterized by extensive neurite outgrowth. This makes them particularly useful for delineating signaling pathways involved in neuronal differentiation. In addition, the SK-N-SH cells are known to form tumors in immunocompromised mice.

Source
This cell line was established in 1970 from metastatic cells found in the bone marrow aspirate of a four-year-old female of unknown ethnicity.

Inventors
• June L. Biedler, PhD, former Chairman, Cell Biology and Genetics Program, Sloan Kettering Institute, Memorial Sloan Kettering Cancer Center
• Barbara A. Spengler, formerly at Sloan Kettering Institute, Memorial Sloan Kettering Cancer Center

Key References

TS543: Human Glioblastoma Cell Line

Description
TS543 is a human brain cancer cell line.

Source
This cell line was established from a brain metastasis in a person with glioblastoma.

Lead Researcher/Research Laboratory
• Cameron W. Brennan, MD, Laboratory Head, Memorial Hospital Research, MSK
• Ingo Mellinghoff, MD, FACP, Chair, Department of Neurology; Chief Brain Tumor Service, Evnin Family Chair in Neuro-Oncology, MSKCC

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

MSK Tracking Code: SK1980-529

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
**TS600: Human Glioblastoma Cell Line**

**Description**
TS600 is a human brain cancer cell line.

**Source**
This cell line was established from a brain metastasis in a person with glioblastoma.

**Lead Researcher/Research Laboratory**
- Cameron W. Brennan, MD, Laboratory Head, Memorial Hospital Research, MSK
- Ingo Mellinghoff, MD, FACP, Chair, Department of Neurology; Chief Brain Tumor Service, Evnin Family Chair in Neuro-Oncology, MSKCC

**Key References**

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions:
Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

---

**TS603: Human Glioblastoma Cell Line**

**Description**
TS603 is a human brain cancer cell line with a mutant IDH1 (R132H) gene.

**Source**
This cell line was established from a brain metastasis in a person with glioblastoma.

**Lead Researcher/Research Laboratory**
- Cameron W. Brennan, MD, Laboratory Head, Memorial Hospital Research, MSK
- Ingo Mellinghoff, MD, FACP, Chair, Department of Neurology; Chief Brain Tumor Service, Evnin Family Chair in Neuro-Oncology, MSKCC

**Key References**

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions:
Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.
**TS676: Human Glioblastoma Cell Line**

**Description**
TS676 is a human cancer cell line with a wildtype IDH1 gene.

**Source**
This cell line was established from a brain metastasis in a person with glioblastoma.

**Lead Researcher/Research Laboratory**
- Cameron W. Brennan, MD, Laboratory Head, Memorial Hospital Research, MSK
- Ingo Mellinghoff, MD, FACP, Chair, Department of Neurology; Chief Brain Tumor Service, Evnin Family Chair in Neuro-Oncology, MSKCC

**Key References**

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: Fill out MSK's Core Express License; see [here](#) for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see [here](#). Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK's Tangible Research Materials team at [TRMOTDRTM@mskcc.org](mailto:TRMOTDRTM@mskcc.org).

**For non-licensing requests from academic-research institutions:**
Contact MSK's Antibody & Bioresource Core Facility at [skiabcf@mskcc.org](mailto:skiabcf@mskcc.org).

---

**Licensing Information:** Corporations and other for-profit entities may nonexclusively license MSK's tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: [TRMOTDRTM@mskcc.org](mailto:TRMOTDRTM@mskcc.org). Note that availability, pricing, and license contracts are subject to change.
CELL LINES

Breast Cancer
CAMA-1: Human Breast Cancer Cell Line  
(ATCC Catalogue No. HTB-21)

Description
CAMA-1 is a luminal-type human breast cancer cell line that displays rounded morphology in adherent tissue culture. These cells are considered Her2-negative and estrogen-receptor/progesterone-receptor (ER/PR)-positive. They are responsive to estrogen and sensitive to growth inhibition by tamoxifen. The CAMA-1 cells have an in-frame mutation in the E-cadherin gene, resulting in a truncated, non-functional protein. In addition, they have oncogenic mutations in PTEN and p53 and amplification of the cyclin D1 gene.

Source
This cell line was established in 1975 from the pleural effusion of a 51-year-old Caucasian female with malignant adenocarcinoma of the breast.

Lead Inventor
• Jorgen Fogh, PhD, formerly at Sloan Kettering Institute, MSK

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: 1) Fill out MSK’s ATCC Express License; see here for links to the online fillable ATCC Express License, as well as a PDF version. 2) After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Materials team at TRMOTDRTM@mskcc.org.

MSK Tracking Code: SK 926

SK-BR-3: Human Breast Cancer Cell Line  
(ATCC Catalogue No. HTB-30)

Description
SK-BR-3 is a human breast cancer cell line that overexpresses the Her2 (Neu/ErbB-2) gene product. These cells display an epithelial morphology in tissue culture and are capable of forming poorly differentiated tumors in immunocompromised mice. The SK-BR-3 cells and products derived from it are used often as positive controls in assays for Her2. In addition, the cell line is also a useful preclinical model to screen for therapeutic agents targeting Her2 and to delineate mechanisms of resistance to Her2-targeted therapies.

Source
This cell line was established in 1970 from the pleural effusion of a 43-year-old Caucasian female with malignant adenocarcinoma of the breast.

Inventors
• Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research
• Germain Trempe, formerly at Sloan Kettering Institute, MSK

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: 1) Fill out MSK’s ATCC Express License; see here for links to the online fillable ATCC Express License, as well as a PDF version. 2) After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Materials team at TRMOTDRTM@mskcc.org.

MSK Tracking Code: SK 808

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
SK-BR-5: Human Breast Cancer Cell Line (aka SK-BR-05)

**Description**
SK-BR-05 is a human breast cancer cell line.

**Source**
This cell line was established from a breast metastasis in a female with breast carcinoma.

**Lead Researcher/Research Laboratory**
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

**Key References**

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see [here](https://www.mskcc.org) for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see [here](https://www.mskcc.org). Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

**For non-licensing requests from academic-research institutions:** Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

SK-BR-7: Human Breast Cancer Cell Line (aka SK-BR-07)

**Description**
SK-BR-07 is a human breast cancer cell line.

**Source**
This cell line was established from a breast metastasis in a female with breast carcinoma.

**Lead Researcher/Research Laboratory**
- Jorgen Fogh, PhD, formerly of Sloan Kettering Institute, MSK
- Germaine Trempe, formerly of Sloan Kettering Institute, MSK

**Key References**

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see [here](https://www.mskcc.org) for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see [here](https://www.mskcc.org). Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

**For non-licensing requests from academic-research institutions:** Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

---

**Licensing Information:** Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
SK1041: Organ-Tropic Metastatic Breast Cancer Cell Line Portfolio

Description
This invention is a portfolio of human breast cancer cell lines selected to metastasize to specific organs. The cell lines are useful both for studying the biological mechanisms of breast cancer metastasis and for screening compounds for anti-metastatic activity.

Highlighted in this portfolio are cell lines jointly owned by MSK and M.D. Anderson; they are available for licensing by MSK through an inter-institutional agreement. In addition to the cell lines included in this panel (and more fully described in marketing sheets throughout this catalogue), MSK has other organ-tropic metastatic breast cancer cell lines available for licensing; in some cases the IP is jointly owned with other institutions. For more information, please contact TRMOTDRTM@mskcc.org.

Source
The SK1041 cell lines were derived from the human breast cancer cell line MDA-MB-231 following multiple rounds of in vivo selection in immunodeficient mice. They exhibit unique metastatic capacities compared to the parental MDA-MB-231 line, including organ-selective homing, distinct transcriptional profiles, and more aggressive phenotypes.

The portfolio includes lung-, bone-, brain-, and adrenal-selective metastatic derivatives in addition to cell lines with increased capacity for tumor self-seeding, a process in which circulating tumor cells return to and grow in the primary tumor, promoting tumor progression and further metastasis. Subsets of these populations have been engineered to express reporter plasmids, including a novel triple-modality reporter that permits nuclear, fluorescent, and bioluminescence imaging in a single experimental model.

Advantages
• In vivo metastatic lesions develop twice as fast and with a three-fold increase in penetrance compared to parental cell line (~6 weeks with ~90% penetrance vs. ~11 weeks with ~30% penetrance), reducing time and cost for each experiment.
• Aggressive phenotype allows easy detection of metastatic lesions by imaging and histochemical methods.
• These cell lines can be used for both in vivo and in vitro modeling (i.e. trans-well, Matrigel migration, etc.) of metastasis.

Key References

Lead Inventor
Joan Massagué, PhD, Chief Scientific Officer and Laboratory Head, Cancer Biology & Genetics Program, MSK

<table>
<thead>
<tr>
<th>Cell Line</th>
<th>Tissue of Origin</th>
<th>Organ-Tropic Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDA-231-AdM-1834</td>
<td>Breast</td>
<td>Adrenal gland</td>
</tr>
<tr>
<td>MDA-231-BoM-1833</td>
<td>Breast</td>
<td>Bone</td>
</tr>
<tr>
<td>MDA-231-BoM-2287</td>
<td>Breast</td>
<td>Bone</td>
</tr>
<tr>
<td>MDA231-BrM2-831</td>
<td>Breast</td>
<td>Brain</td>
</tr>
<tr>
<td>MDA231-LM2-4175</td>
<td>Breast</td>
<td>Lung</td>
</tr>
<tr>
<td>MDA-MB-231 TGL aka MDA231-TGL</td>
<td>Breast</td>
<td>Parental line</td>
</tr>
</tbody>
</table>

Note: The parental MDA-MB-231 was established at MD Anderson.
**MDA-231-AdM-1834: Human Breast Adenocarcinoma Cell Line**

**Description**
MDA-231-AdM-1834 is a breast adenocarcinoma cell line established from the MDA231-TGL cell line and is an adrenal gland-selective metastatic derivative.

This cell line is part of a panel of human breast cancer cell lines selected to metastasize to specific organs. For the complete panel, see SK1041 (Organ-Tropic Metastatic Breast Cancer Cell Line Portfolio).

**Source**
This cell line was established from a 51-year-old female of Caucasian ethnicity and was derived from a metastatic site of pleural effusion.

**Lead Inventor**
- Joan Massagué, PhD, Chief Scientific Officer and Laboratory Head, Cancer Biology & Genetics Program, MSK

This cell line is jointly owned with MD Anderson and is available for licensing through an interinstitutional agreement.

**Key References**

---

**MDA-231-BoM-1833: Human Breast Adenocarcinoma Cell Line**

**Description**
MDA-231-BoM-1833 is a breast adenocarcinoma cell line established from bone metastasis of nude mice inoculated with the parent cell line. It is a triple negative breast cancer (TNBC) cell line.

This cell line is part of a panel of human breast cancer cell lines selected to metastasize to specific organs. For the complete panel, see SK1041 (Organ-Tropic Metastatic Breast Cancer Cell Line Portfolio).

**Source**
This cell line was established from a 51-year-old female of Caucasian ethnicity and was derived from a metastatic site of pleural effusion.

**Lead Inventor**
- Joan Massagué, PhD, Chief Scientific Officer and Laboratory Head, Cancer Biology & Genetics Program, MSK

This cell line is jointly owned with MD Anderson and is available for licensing through an interinstitutional agreement.

**Key References**
- Cox T et al. (2015) Dataset for the proteomic inventory and quantitative analysis of the breast cancer hypoxic secretome associated with osteotropism. Data in brief, 5, 621-625.. PMID: 26649326

**Cellosaurus code:** RRID: CVCL_DP48
**MDA-231-BoM-2287: Human Breast Adenocarcinoma Cell Line**

**Description**
MDA-231-BoM-2287 is a breast adenocarcinoma cell line established from a bone-selective metastatic derivative of the parental MDA231-TGL cell line.

This cell line is part of a panel of human breast cancer cell lines selected to metastasize to specific organs. For the complete panel, see SK1041 (Organ-Tropic Metastatic Breast Cancer Cell Line Portfolio).

**Source**
This cell line was established from a 51-year-old female of Caucasian ethnicity and was derived from a metastatic site of pleural effusion.

**Lead Inventor**
• Joan Massagué, PhD, Chief Scientific Officer and Laboratory Head, Cancer Biology & Genetics Program, MSK

This cell line is jointly owned with MD Anderson and is available for licensing through an interinstitutional agreement.

---

**MDA231-BrM2-831: Human Breast Adenocarcinoma Cell Line**

**Description**
MDA231-BrM2-831 is a breast adenocarcinoma cell line established from the MDA231-TGL cell line after 2 passage in nude mice. It is a triple negative breast cancer (TNBC) cell line and a brain-selective metastatic derivative.

This cell line is part of a panel of human breast cancer cell lines selected to metastasize to specific organs. For the complete panel, see SK1041 (Organ-Tropic Metastatic Breast Cancer Cell Line Portfolio).

**Source**
This cell line was established from a 51-year-old female of Caucasian ethnicity and was derived from a metastatic site of pleural effusion.

**Lead Inventor**
• Joan Massagué, PhD, Chief Scientific Officer and Laboratory Head, Cancer Biology & Genetics Program, MSK

This cell line is jointly owned with MD Anderson and is available for licensing through an interinstitutional agreement.

**Key References**

**Cellosaurus code:** RRID: [CVCL_VR36](https://www.cellosaurus.org/entry/CVCL_VR36)
MDA231-LM2-4175: Human Breast Adenocarcinoma Cell Line

Description
MDA231-LM2-4175 is a breast adenocarcinoma cell line established from the MDA231-TGL cell line after 3 passage in nude mice. It is a triple negative breast cancer (TNBC) cell line and a lung-selective metastatic derivative.

This cell line is part of a panel of human breast cancer cell lines selected to metastasize to specific organs. For the complete panel, see SK1041 (Organ-Tropic Metastatic Breast Cancer Cell Line Portfolio).

Source
This cell line was established from a 51-year-old female of Caucasian ethnicity and was derived from a metastatic site of pleural effusion.

Lead Inventor
• Joan Massagué, PhD, Chief Scientific Officer and Laboratory Head, Cancer Biology & Genetics Program, MSK

This cell line is jointly owned with MD Anderson and is available for licensing through an interinstitutional agreement.

Key References
• Minn A et al. (2005) Genes that mediate breast cancer metastasis to lung. Nature 436(7050) 518-524. PMID: 16049480
• Selicharova I et al. (2008) 2-DE analysis of breast cancer cell lines 1833 and 4175 with distinct metastatic organ-specific potentials: comparison with parental cell line MDA-MB-231. Oncology reports, 19(5), 1237-1244.. PMID: 18424382

Cellosaurus code: RRID: CVCL_5998

MDA-MB-231 TGL: Human Breast Adenocarcinoma Cell Line

Description
MDA-MB-231 TGL is a parental breast adenocarcinoma cell line and a triple negative breast cancer (TNBC) cell line.

This cell line is part of a panel of human breast cancer cell lines selected to metastasize to specific organs. For the complete panel, see SK1041 (Organ-Tropic Metastatic Breast Cancer Cell Line Portfolio).

Source
This cell line was established from a 51-year-old female of Caucasian ethnicity and was derived from a metastatic site of pleural effusion.

Lead Inventor
• Joan Massagué, PhD, Chief Scientific Officer and Laboratory Head, Cancer Biology & Genetics Program, MSK

This cell line is jointly owned with MD Anderson and is available for licensing through an interinstitutional agreement.

Key References
• Minn A et al. (2005) Genes that mediate breast cancer metastasis to lung. Nature 436(7050) 518-524. PMID: 16049480
• Boire A et al. (2017) Complement Component 3 Adapts the Cerebrospinal Fluid for Leptomeningeal Metastasis. Cell, 168(6), 1101-1113.e13.. PMID: 28283064

Cellosaurus code: RRID: CVCL_VR35
CELL LINES

Cervical Cancer

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK's tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
HT-3: Human Cervical Cancer Cell Line
(ATCC Catalogue No. HTB-32)

Description
HT-3 is a human cervical carcinoma cell line that grows in adherent culture. Although this cell line was initially classified as human papillomavirus (HPV) DNA negative, subsequent studies revealed that the cells harbor HPV30 DNA in their genome. The HT-3 cells have a homozygous mutation in the TP53 gene, resulting in the expression of the transactivation-defective, dominant negative form of the protein. These cells form tumors when injected subcutaneously into immunocompromised mice.

Source
This cell line was established in 1963 from a metastatic site (lymph node) in a 53-year-old Caucasian female.

Lead Inventor
• Jorgen Fogh, PhD, formerly at Sloan Kettering Institute, MSK

Key References
• Fogh J et al. (1977) One hundred and twenty-seven cultured human tumor cell lines producing tumors in nude mice. Journal of the National Cancer Institute 59: 221-226. PMID: 327080

Licensing Information
Express License: For internal research purposes by a for-profit entity: 1) Fill out MSK's ATCC Express License; see here for links to the online fillable ATCC Express License, as well as a PDF version.. 2) After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Materials team at TRMOTDRTM@mskcc.org

MSK Tracking Code: SK 784-01

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK's tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
CELL LINES

Colorectal Cancer
**HT-29: Human Colorectal Adenocarcinoma Cell Line (ATCC Catalogue No. HTB-38)**

**Description**
HT-29 is a human colorectal adenocarcinoma cell line with epithelial morphology. These cells are sensitive to the chemotherapeutic drugs 5-fluorouracil and oxaliplatin, which are standard treatment options for colorectal cancer. In addition to being a xenograft tumor model for colorectal cancer, the HT-29 cell line is also used as an in-vitro model to study absorption, transport, and secretion by intestinal cells. Under standard culture conditions, these cells grow as a nonpolarized, undifferentiated multilayer. Altering culture conditions or treating the cells with various inducers, however, results in a differentiated and polarized morphology, characterized by the redistribution of membrane antigens and development of an apical brush-border membrane.

**Source**
This cell line was established in 1964 from the primary tumor of a 44-year-old Caucasian female with colorectal adenocarcinoma.

**Lead Inventor**
- Jorgen Fogh, PhD, formerly at Sloan Kettering Institute, MSK

**Key References**

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: 1) Fill out MSK’s ATCC Express License; see [here](https://atcc.mskcc.org) for links to the online fillable ATCC Express License, as well as a PDF version. 2) After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see [here](https://atcc.mskcc.org). Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK’s Tangible Materials team at [TRMOTDRTM@mskcc.org](mailto:TRMOTDRTM@mskcc.org).

**MSK Tracking Code:** SK 809

---

**SK-CO-1: Human Colorectal Adenocarcinoma Cell Line (ATCC Catalogue No. HTB-39)**

**Description**
SK-CO-1 is a human colorectal adenocarcinoma cell line that displays epithelial morphology and grows in adherent tissue culture. In culture, these cells are capable of invading through an extracellular matrix, such as Matrigel. SK-CO-1 cells do not form tumors when injected into immunocompromised mice, and rarely form colonies in soft agar. These cells have oncogenic mutations in K-Ras (G12V) and adenomatous polyposis coli (APC) proteins.

**Source**
This cell line was established in 1972 from a metastatic site (ascites) in a 65-year-old Caucasian male with colorectal adenocarcinoma.

**Inventors**
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research
- Germain Trempe, formerly at Sloan Kettering Institute, MSK

**Key References**

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: 1) Fill out MSK’s ATCC Express License; see [here](https://atcc.mskcc.org) for links to the online fillable ATCC Express License, as well as a PDF version. 2) After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see [here](https://atcc.mskcc.org). Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK’s Tangible Materials team at [TRMOTDRTM@mskcc.org](mailto:TRMOTDRTM@mskcc.org).

**MSK Tracking Code:** SK2010-072
**SK-CO-10: Human Colon Carcinoma Cell Line**

**Description**
SK-CO-10 is a human colon cancer cell line.

**Source**
This cell line was established from a colon metastasis in a female with colon carcinoma.

**Lead Researcher/Research Laboratory**
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research
- Kenneth O. Lloyd, formerly of Cell Culture, Antibody, and Biochemistry Core, Sloan Kettering Institute, MSK

**Key References**

**Licensing Information**

**Express License:** For internal research purposes by a for-profit entity: Fill out MSK's Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

**For non-licensing requests from academic-research institutions:**
Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

---

**SK-CO-15: Human Colon Carcinoma Cell Line**

**Description**
SK-CO-15 is a human colon cancer cell line.

**Source**
This cell line was established from a colon metastasis in a person with colon carcinoma.

**Lead Researcher/Research Laboratory**
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research
- Kenneth O. Lloyd, formerly of Cell Culture, Antibody, and Biochemistry Core, Sloan Kettering Institute, MSK

**Key References**

**Licensing Information**

**Express License:** For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

**For non-licensing requests from academic-research institutions:**
Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

---

**Licensing Information:** Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
CELL LINES

Esophageal Cancer

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
SK-GT-4: Human Esophageal Adenocarcinoma Cell Line, Primary (aka SK-GT-04)

Description
SK-GT-04 is a human esophageal carcinoma cell line.

Source
This cell line was established from an esophageal metastasis in a person with esophageal carcinoma.

Lead Researcher/Research Laboratory
- Anthony Albino, PhD, formerly with Memorial Sloan Kettering

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

SK-NEP-1: Human Esophageal Adenocarcinoma Cell Line, Metastatic (aka SK-NEP-01)

Description
SK-NEP-1 was originally described as an anaplastic Wilms-tumor/renal-cancer cell line. It has, however, been reclassified as a cell line belonging to the Ewing sarcoma family of tumors, since these cells harbor the oncogenic EWS-FLI1 chromosomal rearrangement. These cells express mutant p53 and are known to form tumors in immunocompromised mice.

Source
This cell line was established in 1971 from a metastatic site (pleural effusion) in a 25-year-old Caucasian female.

Inventors
- Germain Trempe, formerly at Sloan Kettering Institute, MSK
- Jorgen Fogh, PhD, formerly at Sloan Kettering Institute, MSK

Key References
- Fogh J et al. (1977) One hundred and twenty-seven cultured human tumor cell lines producing tumors in nude mice. Journal of the National Cancer Institute 59: 221-226. PMID: 327080
- Smith MA et al. (2008) SK-NEP-1 and Rh1 are Ewing family tumor lines. Pediatric Blood & Cancer 50: 703-706. PMID: 17154184

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

MSK Tracking Code: SK2008-052
CELL LINES
Head & Neck Cancer

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
MSK-921: Human Head & Neck Squamous Cell Line

Description
MSK-921 is a human head-and-neck cancer cell line.

Source
This cell line was established from a subject with head-and-neck squamous cell carcinoma.

Lead Researcher/Research Laboratory
• Peter G. Sacks, MD, former Associate Attending, Surgery, Memorial Hospital, MSK

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK's Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK's Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK's Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

MSK-Leuk 1: Human Oral Leukoplakia Cell Line

Description
MSK-Leuk 1 is a human oral leukoplakia cancer cell line.

Source
This cell line was established from a female with oral leukoplakia.

Lead Researcher/Research Laboratory
• Peter G. Sacks, MD, former Associate Attending, Surgery, Memorial Hospital, MSK

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK's Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK's Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK's Antibody & Bioresource Core Facility at skiabcf@mskcc.org.
CELL LINES

Liver Cancer
SK-HEP-1: Human Hepatic Adenocarcinoma Cell Line
(ATCC Catalogue No. HTB-52)

Description
SK-HEP-1 is an immortal, human hepatic adenocarcinoma cell line that
grows in adherent culture. This cell line is capable of forming tumors in
immunocompromised mice. SK-HEP-1 cells in culture have been shown to produce
fibronectin and functionally active alpha-1 protease inhibitor. In addition, they
constitutively produce Interleukin-1.

Source
This cell line was established in 1971 from the ascites fluids of a
52-year-old Caucasian male with adenocarcinoma of the liver.

Inventors
• Germain Trempe, formerly at Sloan Kettering Institute, MSK
• Jorgen Fogh, PhD, formerly at Sloan Kettering Institute, MSK

Key References
• Fogh J et al. (1977) One hundred and twenty-seven cultured human tumor
cell lines producing tumors in nude mice. *Journal of the National Cancer
Institute* 59: 221-226. PMID: 327080
• Glasgow JE et al. (1984) Fibronectin synthesized by a human hepatoma cell
line. *Cancer Research* 44: 3022-3028. PMID: 6327032
• Wang L et al. (2012) A novel monoclonal antibody to fibroblast growth
factor 2 effectively inhibits growth of hepatocellular carcinoma xenografts.
*Molecular Cancer Therapeutics* 11: 864-872. PMID: 22351746

Comments
An alternative hypothesis regarding the origin of the SK-HEP-1 cells was presented by
Heffelfinger and colleagues, who claim that these cells do not display properties of
hepatocytes and are of endothelial origin. PMID: 1371504.

Licensing Information
Express License: For internal research purposes by a for-profit entity: 1) Fill out MSK's ATCC
Express License; see here for links to the online fillable ATCC Express License, as well as a PDF
version. 2) After execution by MSK, you will receive a signed copy, and can then place your order
with ATCC. For detailed guidance on how to fill out this webform, see here. Please note: In order
to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive
license are non-negotiable. This license is only available for select cell lines, including this
one. Once this license has been executed by MSK, you will receive a signed copy and payment
instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK's Tangible Materials team at TRMOTDRTM@mskcc.org.

MSK Tracking Code: SK1980-535

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes.
MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
CELL LINES

Lung Cancer
Calu-1: Human Lung Squamous Cell Carcinoma Cell Line (aka Calu-01)

Description
Calu-1 is a non-small-cell lung cancer (NSCLC) cell line that grows in adherent culture and displays epithelial morphology. These cells express wildtype LKB1, wildtype EGFR, and mutant K-Ras (G12C). In addition, they lack expression of both p53 (homozygous deletion) and FHIT (Fragile Histidine Triad) tumor-suppressor proteins. The Calu-1 cells are intrinsically resistant to erlotinib, an EGFR tyrosine kinase inhibitor used in the treatment of NSCLC patients. These cells are capable of forming tumors in immunocompromised mice.

Source
This cell line was established in 1971 from a metastatic site (pleura) in a 47-year-old Caucasian male with epidermoid carcinoma of the lung.

Inventors
- Germain Trempe, formerly at Sloan Kettering Institute, MSK
- Jorgen Fogh, PhD, formerly at Sloan Kettering Institute, MSK

Key References
- Fogh J et al. (1977) One hundred and twenty-seven cultured human tumor cell lines producing tumors in nude mice. Journal of the National Cancer Institute 59: 221-226. PMID: 327080

Licensing Information
Express License: Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.
Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

MSK Tracking Code: SK 784

Calu-3: Human Lung Adenocarcinoma Cell Line, Metastatic (aka Calu-03)

Description
Calu-3 is a non-small-cell lung cancer cell line that grows in adherent culture and displays epithelial morphology. These cells have constitutively active ErbB2/Her2 due to amplification of the ERBB2 gene. They express wildtype EGFR and mutant K-Ras (G13D). In addition, they harbor mutations in TP53 and CDKN2A genes. The Calu-3 cells are sensitive to erlotinib (EGFR tyrosine kinase inhibitor) and cetuximab (a monoclonal antibody that blocks ligand binding to EGFR and prevents downstream signaling), two commonly used drugs targeting ErbB receptors. These cells are capable of forming tumors in immunocompromised mice.

Source
This cell line was established in 1975 from a metastatic site (pleural effusion) in a 25-year-old Caucasian male with adenocarcinoma of the lung.

Inventors
- Germain Trempe, formerly at Sloan Kettering Institute, MSK
- Jorgen Fogh, PhD, formerly at Sloan Kettering Institute, MSK

Key References
- Fogh J et al. (1977) One hundred and twenty-seven cultured human tumor cell lines producing tumors in nude mice. Journal of the National Cancer Institute 59: 221-226. PMID: 327080

Licensing Information
Express License: Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.
Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

MSK Tracking Code: SK1980-533
Calu-5: Human Lung Adenocarcinoma Cell Line (aka Calu-05)

Description
Calu-05 is a human lung adenocarcinoma cell line.

Source
This cell line was established in 1971 from lung metastasis in a person with lung adenocarcinoma.

Lead Researcher/Research Laboratory
- Jorgen Fogh, PhD, formerly at Sloan Kettering Institute, Memorial Sloan Kettering

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions:
Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Calu-6: Human Lung Anaplastic Carcinoma Cell Line (aka Calu-06)

Description
CaLu-06 is a human lung adenocarcinoma cell line.

Source
This cell line was established in 1971 from lung metastasis in lung adenocarcinoma

Lead Researcher/Research Laboratory
- Jorgen Fogh, PhD, formerly at Sloan Kettering Institute, Memorial Sloan Kettering

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions:
Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.
SK-LC-01: Human Lung Adenocarcinoma Cell Line

Description
SK-LC-01 is a human lung cancer cell line.

Source
This cell line was established from a lung metastasis in a 66-year-old female with lung adenocarcinoma.

Lead Researcher/Research Laboratory
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

Key References

Licensing Information
**Express License:** For internal research purposes by a for-profit entity: Fill out MSK's Core Express License; see [here](#) for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see [here](#). Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK's Tangible Research Materials team at TRMOTDRTM@mskcc.org. For non-licensing requests from academic-research institutions: Contact MSK's Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

SK-LC-02: Human Lung Adenocarcinoma Cell Line

Description
SK-LC-02 is a human lung cancer cell line.

Source
This cell line was established from a lung metastasis in a 65-year-old male with lung adenocarcinoma.

Lead Researcher/Research Laboratory
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

Key References

Licensing Information
**Express License:** For internal research purposes by a for-profit entity: Fill out MSK's Core Express License; see [here](#) for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see [here](#). Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK's Tangible Research Materials team at TRMOTDRTM@mskcc.org. For non-licensing requests from academic-research institutions: Contact MSK's Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

**Licensing Information:** Corporations and other for-profit entities may nonexclusively license MSK's tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
SK-LC-04: Human Lung Adenocarcinoma Cell Line

Description
SK-LC-04 is a human lung cancer cell line.

Source
This cell line was established from a lung metastasis in a patient with lung adenocarcinoma.

Lead Researcher/Research Laboratory
• Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

SK-LC-05: Human Lung Large Cell Carcinoma Cell Line

Description
SK-LC-05 is a human lung cancer cell line.

Source
This cell line was established from a lung metastasis in a patient with lung large cell carcinoma.

Lead Researcher/Research Laboratory
• Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.
SK-LC-06: Human Lung Large Cell Anaplastic Carcinoma Cell Line

Description
SK-LC-06 is a human lung cancer cell line.

Source
This cell line was established from a lung metastasis in a female with lung large cell anaplastic carcinoma.

Lead Researcher/Research Laboratory
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see [here](#) for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see [here](#). Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

SK-LC-07: Human Lung Adenocarcinoma Cell Line

Description
SK-LC-07 is a human lung cancer cell line.

Source
This cell line was established from a lung metastasis in a patient with lung cancer.

Lead Researcher/Research Laboratory
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see [here](#) for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see [here](#). Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.
SK-LC-08: Human Lung Squamous Cell Line

Description
SK-LC-08 is a human lung cancer cell line.

Source
This cell line was established from a lung metastasis from a patient with lung squamous cell carcinoma.

Lead Researcher/Research Laboratory
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK's Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK's Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK's Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

SK-LC-09: Human Lung Adenocarcinoma Cell Line

Description
SK-LC-09 is a human lung cancer cell line.

Source
This cell line was established from a lung metastasis from a patient with lung adenocarcinoma.

Lead Researcher/Research Laboratory
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK's Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK's Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK's Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
**SK-LC-10: Human Lung Adenocarcinoma Cell Line**

**Description**
SK-LC-10 is a human lung cancer cell line.

**Source**
This cell line was established from a lung metastasis from a person with lung adenocarcinoma.

**Lead Researcher/Research Laboratory**
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

**Key References**

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: Fill out MSK's Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK's Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK's Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

**SK-LC-11: Human Lung Adenocarcinoma Cell Line**

**Description**
SK-LC-11 is a human lung cancer cell line.

**Source**
This cell line was established from a lung metastasis from a patient with lung adenocarcinoma.

**Lead Researcher/Research Laboratory**
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

**Key References**

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: Fill out MSK's Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK's Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK's Antibody & Bioresource Core Facility at skiabcf@mskcc.org.
SK-LC-12: Human Lung Adenocarcinoma Cell Line

Description
SK-LC-12 is a human lung cancer cell line.

Source
This cell line was established from a lung metastasis from a person with lung adenocarcinoma.

Lead Researcher/Research Laboratory
• Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

SK-LC-13: Human Lung Small Cell Carcinoma Cell Line

Description
SK-LC-13 is a human lung cancer cell line.

Source
This cell line was established from a lung metastasis from a person with lung small cell carcinoma.

Lead Researcher/Research Laboratory
• Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
**SK-LC-14: Human Lung Squamous Cell Carcinoma Cell Line, Primary**

**Description**
SK-LC-14 is a human lung cancer cell line.

**Source**
This cell line was established from a lung metastasis from a person with lung squamous cell carcinoma.

**Lead Researcher/Research Laboratory**
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

**Key References**

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

**For non-licensing requests from academic-research institutions:**
Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

---

**SK-LC-15: Human Lung Adenocarcinoma Cell Line, Primary**

**Description**
SK-LC-15 is a human lung cancer cell line.

**Source**
This cell line was established from a lung metastasis from a person with lung adenocarcinoma.

**Lead Researcher/Research Laboratory**
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

**Key References**

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

**For non-licensing requests from academic-research institutions:**
Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

---

**Licensing Information:** Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
SK-LC-16: Human Lung Adenocarcinoma Cell Line, Primary

Description
SK-LC-16 is a human lung cancer cell line.

Source
This cell line was established from a lung metastasis from a person with lung adenocarcinoma.

Lead Researcher/Research Laboratory
Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

SK-LC-17: Human Lung Anaplastic Carcinoma Cell Line, Primary

Description
SK-LC-17 is a human lung cancer cell line.

Source
This cell line was established from a lung metastasis from a 66-year-old male with lung small cell carcinoma.

Lead Researcher/Research Laboratory
Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.
**SK-LC-19: Human Lung Adenocarcinoma Cell Line**

**Description**
SK-LC-19 is a human lung cancer cell line.

**Source**
This cell line was established from a lung metastasis from a person with lung carcinoma.

**Lead Researcher/Research Laboratory**
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

**Key References**

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: Fill out MSK's Core Express License; see [here](#) for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see [here](#). Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.
**Commercial License:** Contact MSK's Tangible Research Materials team at TRMOTDRTM@mskcc.org.

**For non-licensing requests from academic-research institutions:**
Contact MSK's Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

**Cellosaurus code:** RRID: CVCL_547

---

**SK-LC-21: Human Lung Adenocarcinoma Cell Line**

**Description**
SK-LC-21 is a human lung cancer cell line.

**Source**
This cell line was established from a lung metastasis from a person with lung carcinoma.

**Lead Researcher/Research Laboratory**
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: Fill out MSK's Core Express License; see [here](#) for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see [here](#). Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.
**Commercial License:** Contact MSK's Tangible Research Materials team at TRMOTDRTM@mskcc.org.

**For non-licensing requests from academic-research institutions:**
Contact MSK's Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

**Cellosaurus code:** RRID: CVCL_547

---

**Licensing Information:** Corporations and other for-profit entities may nonexclusively license MSK's tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
**SK-LU-1: Human Lung Adenocarcinoma Cell Line, Primary (aka SK-LU-01, ATCC Catalogue No. HTB-57)**

**Description**

SK-LU-1 is a lung adenocarcinoma cell line that displays epithelial morphology and grows in adherent culture. This cell line expresses mutant K-Ras (G12D) and has homozygous deletions in the CDH6 and CDKN2A genes. These cells do not express the enzyme telomerase reverse transcriptase (hTERT) and consequently lack telomerase activity. This correlates with significantly reduced tumorigenicity in vitro and in vivo. These cells, however, display characteristics of alternative telomere lengthening (ALT) mechanisms (i.e., heterogeneity of lengthening of telomeres and the presence of distinct nuclear structures called ALT-associated promyelocytic leukemia bodies). The SK-LU-1 cells do not form tumors when injected into immunocompromised mice.

**Source**

This cell line was established in 1969 from a 60-year-old Caucasian female with adenocarcinoma of the lung.

**Lead Inventor**

- Chester M. Southam, MD, formerly at Sloan Kettering Institute, MSK

**Key References**


**Licensing Information**

**Express License:** For internal research purposes by a for-profit entity: Fill out MSK's Express License here. After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed instructions about how to fill in this contract, see here. In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. Please note: This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK's Tangible Materials team at TRMOTDRTM@mskcc.org.

**MSK Tracking Code:** SK2005-049

---

**SK-MES-1: Human Lung Cancer Cell Line (ATCC Catalogue No. HTB-58)**

**Description**

SK-MES-1 is a human lung cancer cell line that displays epithelial morphology and grows as monolayers in tissue culture. These cells exhibit a cytokeratin expression pattern typical of simple epithelia (i.e., CK7, CK8, CK18, and CK19), and similar to that found in adenocarcinomas. In addition, the expression of Lamins A, B, and C is readily detected in these cells. The SK-MES-1 cells are known to form tumors in immunocompromised mice.

**Source**

This cell line was established in 1970 from a metastatic site (pleural effusion) in a 65-year-old Caucasian male with squamous cell carcinoma of the lung.

**Inventors**

- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK former Director, New York Branch, Ludwig Institute for Cancer Research
- Germain Trempe, formerly at Sloan Kettering Institute, MSK

**Key References**


**Licensing Information**

**Express License:** For internal research purposes by a for-profit entity: Fill out MSK's Express License here. After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed instructions about how to fill in this contract, see here. In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. Please note: This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK's Tangible Materials team at TRMOTDRTM@mskcc.org.

**MSK Tracking Code:** SK2009-091
CELL LINES

Lymphoma

**Licensing Information:** Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. **MSK Office of Technology Development Contact for more information:** TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
SK-LY-16: Human Lymphoma Cell Line

Description
SK-LY-16 is a human lymphoma cell line.

Source
This cell line was established from a B-cell in a person with lymphoma

Lead Researcher/Research Laboratory
• Jorgen Fogh, PhD, formerly at Sloan Kettering Institute, Memorial Sloan Kettering

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions:
Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.


Description
SK-LY-18 is a human lymphoma cell line.

Source
This cell line was established from a B-cell in a person with lymphoma

Lead Researcher/Research Laboratory
• Jorgen Fogh, PhD, formerly at Sloan Kettering Institute, Memorial Sloan Kettering

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions:
Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.
CELL LINES

Melanoma
**HT-144: Human Melanoma Cell Line**
*(ATCC Catalogue No. HTB-63)*

**Description**
HT-144 is a malignant human melanoma cell line that displays aneuploid fibroblastic morphology and grows in adherent tissue culture. This cell line has been reported to be nonpermissive for human cytomegalovirus (HCMV). HT-144 cells form xenograft tumors when injected into immunocompromised mice. These cells contain a mutation in the ATM gene, resulting in the expression of a truncated protein, which causes increased sensitivity to UVB and ionizing radiation compared to other melanoma cell lines. The HT-144 cells also express mutant B-Raf (V600E).

**Source**
This cell line was established in 1966 from a metastatic site (subcutaneous tissue) in a 29-year-old Caucasian male with malignant melanoma.

**Inventors**
- Jorgen Fogh, PhD, formerly at Sloan Kettering Institute, MSK
- Germaine Trempe, formerly at Sloan Kettering Institute, MSK

**Key References**
- Fogh J et al. (1977) One hundred and twenty-seven cultured human tumor cell lines producing tumors in nude mice. *Journal of the National Cancer Institute* 59: 221-226. PMID: 327080
- Chen B et al. (2012) BRAFV600E negatively regulates the AKT pathway in melanoma cell lines. *PLoS One* 7: e42598. PMID: 22880048

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: 1) Fill out MSK’s ATCC Express License; see here for links to the online fillable ATCC Express License, as well as a PDF version. 2) After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK’s Tangible Materials team at TRMOTDRTM@mskcc.org.

**MSK Tracking Code:** SK1980-544

---

**Malme-3M: Human Melanoma Cell Line**
*(ATCC Catalogue No. HTB-64)*

**Description**
Malme-3M is a malignant human melanoma cell line that displays fibroblast-like morphology and grows in mixed culture (adherent-suspension). This cell line has been shown to be dependent upon microphthalmia-associated transcription factor (MITF) activity for growth and survival. Malme-3M cells form tumors when injected into immunocompromised mice. These cells express mutant B-Raf (V600E) and wildtype N-Ras.

**Source**
This cell line was established in 1975 from a metastatic site (lung) in a 43-year-old Caucasian male with metastatic melanoma.

**Inventors**
- Jorgen Fogh, PhD, formerly at Sloan Kettering Institute, MSK
- Germaine Trempe, formerly at Sloan Kettering Institute, MSK

**Key References**
- Fogh J et al. (1977) One hundred and twenty-seven cultured human tumor cell lines producing tumors in nude mice. *Journal of the National Cancer Institute* 59: 221-226. PMID: 327080
- Xing F et al. (2012) Concurrent loss of the PTEN and RB1 tumor suppressors attenuates RAF dependence in melanomas harboring (V600E)BRAF. *Oncogene* 31: 446-457 (PubMed ID: 21725359)

**Comments**
Malme-3, a normal skin fibroblast cell line, isolated from the same patient as the Malme-3M melanoma cell line, is also available for licensing.

**Licensing Information**
**Commercial License:** Contact MSK’s Tangible Materials team at TRMOTDRTM@mskcc.org.

**MSK Tracking Code:** SK2009-092

---

**Licensing Information:** Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
SK-MEL-1: Human Melanoma Cell Line (ATCC Catalogue No. HTB-67)

Description
SK-MEL-1 is the first of a series of melanoma cell lines established from patient-derived tumor samples. This cell line is grown in suspension culture and expresses mutant B-Raf (V600E) and wildtype N-Ras. This cell line is known to form tumors in immunocompromised mice.

Source
This cell line was established in 1966 from a metastatic site (thoracic lymph duct) in a 29-year-old Caucasian male with malignant melanoma.

Lead Inventor
- Herbert F. Oettgen, MD, formerly at Sloan Kettering Institute, MSK

Key References
- Oettgen HF et al. (1968) Suspension culture of a pigment-producing cell line derived from a human malignant melanoma. Journal of the National Cancer Institute 41: 827–843. PMID: 4879578
- Fogh J et al. (1977) One hundred and twenty-seven cultured human tumor cell lines producing tumors in nude mice. Journal of the National Cancer Institute 59: 221-226. PMID: 327080
- Xing F et al. (2012) Concurrent loss of the PTEN and RBl tumor suppressors attenuates RAF dependence in melanomas harboring (V600E) BRAF. Oncogene 31(4):446-457. PMID: 21725359

Licensing Information
Express License: For internal research purposes by a for-profit entity: 1) Fill out MSK’s ATCC Express License; see here for links to the online fillable ATCC Express License, as well as a PDF version. 2) After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK's Tangible Materials team at TRMOTDRTM@mskcc.org.

MSK Tracking Code: SK2004-052

SK-MEL-2: Human Melanoma Cell Line (ATCC Catalogue No. HTB-68)

Description
SK-MEL-2 is one of a series of melanoma cell lines established from patient-derived tumor samples. This cell line expresses wildtype B-Raf and mutant N-Ras (Q61R). This cell line is known to form tumors in immunocompromised mice.

Source
This cell line was established in 1972 from a metastatic site on the thigh of a 60-year-old Caucasian male with malignant melanoma.

Inventors
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research
- Germain Trempe, formerly at Sloan Kettering Institute, MSK

Key References
- Fogh J et al. (1977) One hundred and twenty-seven cultured human tumor cell lines producing tumors in nude mice. Journal of the National Cancer Institute 59: 221-226. PMID: 327080

Licensing Information
Express License: For internal research purposes by a for-profit entity: 1) Fill out MSK’s ATCC Express License; see here for links to the online fillable ATCC Express License, as well as a PDF version. 2) After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK's Tangible Materials team at TRMOTDRTM@mskcc.org.

MSK Tracking Code: SK 779
SK-MEL-3: Human Melanoma Cell Line
(ATCC Catalogue No. HTB-69)

Description
SK-MEL-3 is one of a series of melanoma cell lines established from patient-derived tumor samples. This cell line is known to form tumors in immunocompromised mice.

Source
This cell line was established in 1972 from a metastatic site (lymph node) in a 42-year-old Caucasian female with malignant melanoma.

Inventors
• Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research
• Germain Trempe, formerly at Sloan Kettering Institute, MSK

Key References
• Fogh J et al. (1977) One hundred and twenty-seven cultured human tumor cell lines producing tumors in nude mice. Journal of the National Cancer Institute 59: 221-226. PMID: 327080

Licensing Information
Express License: For internal research purposes by a for-profit entity: 1) Fill out MSK’s ATCC Express License; see here for links to the online fillable ATCC Express License, as well as a PDF version. 2) After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Materials team at TRMOTDRTM@mskcc.org. MSK Tracking Code: SK1980-523

SK-MEL-5: Human Melanoma Cell Line
(ATCC Catalogue No. HTB-70)

Description
SK-MEL-5 is one of a series of melanoma cell lines established from patient-derived tumor samples. This cell line expresses mutant B-Raf (V600E) and wildtype N-Ras. This cell line is known to form tumors in immunocompromised mice.

Source
This cell line was established in 1974 from a metastatic site (axillary lymph node) in a 24-year-old Caucasian female with malignant melanoma.

Inventors
• Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research
• Toshitada Takahashi, MD, formerly at Sloan Kettering Institute, MSK

Key References
• Xing F et al. (2012) Concurrent loss of the PTEN and RB1 tumor suppressors attenuates RAF dependence in melanomas harboring (V600E) BRAF. Oncogene 31(4):446-457. PMID: 21725359

Licensing Information
Express License: For internal research purposes by a for-profit entity: 1) Fill out MSK’s ATCC Express License; see here for links to the online fillable ATCC Express License, as well as a PDF version. 2) After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Materials team at TRMOTDRTM@mskcc.org. MSK Tracking Code: SK1980-522

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
SK-MEL-24: Human Melanoma Cell Line
(ATCC Catalogue No. HTB-71)

Description
SK-MEL-24 is one of a series of melanoma cell lines established from patient-derived tumor samples. This cell line expresses wildtype B-Raf and wildtype N-Ras. This cell line is known to form tumors in immunocompromised mice.

Source
This cell line was established from a metastatic site (lymph node) in a 67-year-old Caucasian male with malignant melanoma.

Inventors
• Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research
• Toshitada Takahashi, MD, formerly at Sloan Kettering Institute, MSK

Key References
• Xing F et al. (2012) Concurrent loss of the PTEN and RB1 tumor suppressors attenuates RAF dependence in melanomas harboring (V600E) BRAF. Oncogene 31(4): 446-457. PMID: 21725359

Licensing Information
Express License: For internal research purposes by a for-profit entity: 1) Fill out MSK’s ATCC Express License; see here for links to the online fillable ATCC Express License, as well as a PDF version. 2) After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Materials team at TRMOTDRTM@mskcc.org.

SK-MEL-26: Human Melanoma Cell Line

Description
SK-MEL-26 is one of a series of melanoma cell lines established from patient-derived tumor samples. This cell line expresses mutant B-Raf (V600E) and wildtype N-Ras. This cell line is known to form tumors in immunocompromised mice.

Source
This cell line was established in 1975 from a subcutaneous malignant melanoma on the right leg of a 54-year-old Caucasian female.

Inventors
• Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research
• Toshitada Takahashi, MD, formerly at Sloan Kettering Institute, MSK

Key References
• Fogh J et al. (1977) One hundred and twenty-seven cultured human tumor cell lines producing tumors in nude mice. Journal of the National Cancer Institute 59: 221-226. PMID: 327080
• Xing F et al. (2012) Concurrent loss of the PTEN and RB1 tumor suppressors attenuates RAF dependence in melanomas harboring (V600E) BRAF. Oncogene 31(4): 446-457. PMID: 21725359

Licensing Information
MSK Tracking Code: SK1980-546

MSK Tracking Code: SK2003-078
SK-MEL-28: Human Melanoma Cell Line (ATCC Catalogue No. HTB-72)

Description
SK-MEL-28 is one of a series of melanoma cell lines established from patient-derived tumor samples. This cell line expresses mutant B-Raf (V600E) and wildtype N-Ras. This cell line is known to form tumors in immunocompromised mice.

Source
This cell line was established from the primary tumor on the skin of a 51-year-old male of unknown ethnicity.

Inventors
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research
- Toshitada Takahashi, MD, formerly at Sloan Kettering Institute, MSK

Key References
- Xing F et al. (2012) Concurrent loss of the PTEN and RB1 tumor suppressors attenuates RAF dependence in melanomas harboring (V600E) BRAF. Oncogene 31(4):446-457. PMID: 21725359

Licensing Information
Express License: For internal research purposes by a for-profit entity: 1) Fill out MSK’s ATCC Express License; see here for links to the online fillable ATCC Express License, as well as a PDF version. 2) After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Materials team at TRMOTDRTM@mskcc.org.

MSK Tracking Code: SK1980-524

SK-MEL-29: Human Melanoma Cell Line

Description
SK-MEL-29 is one of a series of melanoma cell lines established from patient-derived tumor samples. This cell line expresses mutant B-Raf (V600E) and wildtype N-Ras. This cell line is known to form tumors in immunocompromised mice.

Source
This cell line was established in 1975 from a recurrent melanoma at the apex of the left axilla of a 19-year-old Caucasian male.

Inventors
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research
- Toshitada Takahashi, MD, formerly at Sloan Kettering Institute, MSK

Key References
- Xing F et al. (2012) Concurrent loss of the PTEN and RB1 tumor suppressors attenuates RAF dependence in melanomas harboring (V600E) BRAF. Oncogene 31(4):446-457. PMID: 21725359

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

MSK Tracking Code: SK1980-525
SK-MEL-30: Human Melanoma Cell Line

Description
SK-MEL-30 is one of a series of melanoma cell lines established from patient-derived tumor samples. This cell line expresses wildtype B-Raf and mutant N-Ras (Q61K). This cell line is known to form tumors in immunocompromised mice.

Source
This cell line was established in 1975 from a soft-tissue metastatic site (dermis) in a 66-year-old Caucasian male.

Inventors
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research
- Toshitada Takahashi, MD, formerly at Sloan Kettering Institute, MSK

Key References
- Xing F et al. (2012) Concurrent loss of the PTEN and RB1 tumor suppressors attenuates RAF dependence in melanomas harboring (V600E) BRAF. Oncogene 31(4): 446-457. PMID: 21725359

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions:
Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

MSK Tracking Code: SK1980-526

SK-MEL-31: Human Melanoma Cell Line (ATCC Catalogue No. HTB-73)

Description
SK-MEL-31 is one of a series of melanoma cell lines established from patient-derived tumor samples. This cell line expresses wildtype B-Raf and wildtype N-Ras. This cell line is known to form tumors in immunocompromised mice.

Source
This cell line was established from the tumor cells of a female, of unknown age and ethnicity, with malignant melanoma.

Inventors
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research
- Toshitada Takahashi, MD, formerly at Sloan Kettering Institute, MSK

Key References
- Xing F et al. (2012) Concurrent loss of the PTEN and RB1 tumor suppressors attenuates RAF dependence in melanomas harboring (V600E) BRAF. Oncogene 31(4): 446-457. PMID: 21725359

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License here. After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed instructions about how to fill in this contract, see here. In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. Please note: This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Materials team at TRMOTDRTM@mskcc.org.

MSK Tracking Code: SK1980-527
CELL LINES

Multiple Myeloma
SK-MM-1: Human Multiple Myeloma Cell Line (aka SK-MM-01)

Description
SK-MM-1 is a multiple myeloma cell line that grows in suspension culture. These cells display plasmacytoid morphology and have a doubling time of approximately 32 hours. SK-MM-1 cells do not express the Epstein-Barr virus nuclear antigen. These cells express the pan-B-cell marker B1 and the late B-cell/plasma cell marker BL3, but do not express any T-lymphocyte, myeloid, or early B-lymphocyte markers. SK-MM-1 cells secrete kappa light chains, but do not secrete any heavy chains.

Source
This cell line was established in 1981 from immature plasma cells in the bone marrow of a 51-year-old male, of unknown ethnicity, with plasma cell leukemia.

Lead Inventor
• Alan N. Houghton, MD, Attending Physician, Department of Medicine, Memorial Hospital; and Member, Immunology Program, Sloan Kettering Institute, MSK

Key References
• Eton O et al. (1989) Establishment and characterization of two human myeloma cell lines secreting kappa light chains. Leukemia 3: 729-735. PMID: 2506399

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions:
Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

MSK Tracking Code: SK 440

SK-MM-2: Human Multiple Myeloma Cell Line (aka SK-MM-02)

Description
SK-MM-2 is a multiple myeloma cell line that grows in suspension culture. These cells display plasmacytoid morphology and have a doubling time of approximately 60 hours. SK-MM-2 cells do not express the Epstein-Barr virus nuclear antigen. These cells express the pan-B-cell marker B1 and the late B-cell/plasma cell markers BL3, OKT10, and PCA-1, but do not express any T-lymphocyte, myeloid, or early B-lymphocyte markers. These cells secrete kappa light chains, but do not secrete any heavy chains. In addition, SK-MM-2 cells also express elevated levels of cyclin D1 mRNA.

Source
This cell line was established in 1982, from a leukapheresis sample of peripheral blood, from a 54-year-old male, of unknown ethnicity, with plasma cell leukemia.

Lead Inventor
• Alan N. Houghton, MD, Attending Physician, Department of Medicine, Memorial Hospital; and Member, Immunology Program, Sloan Kettering Institute, MSK

Key References
• Eton O et al. (1989) Establishment and characterization of two human myeloma cell lines secreting kappa light chains. Leukemia 3: 729-735. PMID: 2506399

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions:
Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

MSK Tracking Code: SK1989-002
CELL LINES

Ovarian Cancer

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
Caov-3: Human Ovarian Cancer Cell Line (ATCC Catalogue No. HTB-75)

**Description**
The Caov-3 cell line is a primary ovarian cancer cell line with epithelial morphology. These cells form tightly packed colonies in adherent culture. All-trans retinoic acid has been shown to suppress the growth of Caov-3 ovarian carcinoma cells *in vitro*. These cells express the NB/70K, CA-125, Ba-2, and Ca-1 tumor-associated antigens. The Caov-3 cells harbor a nonsense mutation in the p53 gene, and have multiple copies of the ovarian cancer oncogene PIK3CA. They are sensitive to vinblastine, cisplatin, and adriamycin. These cells fail to grow in soft agar but are tumorigenic when injected into immunocompromised mice.

**Source**
This cell line was established from the primary tumor of a 54-year-old Caucasian female with adenocarcinoma of the ovary.

**Lead Inventor**
• Jorgen Fogh, PhD, formerly at Sloan Kettering Institute, MSK

**Key References**

**Licensing Information**
*Express License*: For internal research purposes by a for-profit entity: 1) Fill out MSK’s ATCC Express License; see [here](#) for links to the online fillable ATCC Express License, as well as a PDF version. 2) After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see [here](#). Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

*Commercial License*: Contact MSK’s Tangible Materials team at TRMOTDRTM@mskcc.org.

**MSK Tracking Code**: SK2010-069

---

Caov-4: Human Ovarian Cancer Cell Line (ATCC Catalogue No. HTB-76)

**Description**
The Caov-4 cell line is an ovarian cancer cell line with epithelial morphology that grows in adherent culture. These cells harbor a loss-of-function mutation in the p53 gene and are sensitive to cisplatin.

**Source**
This cell line was established from a metastatic site (fallopian tube) in a 45-year-old Caucasian female with adenocarcinoma of the ovary.

**Lead Inventor**
• Jorgen Fogh, PhD, formerly at Sloan Kettering Institute, MSK

**Key References**

**Licensing Information**
*Express License*: For internal research purposes by a for-profit entity: 1) Fill out MSK’s ATCC Express License; see [here](#) for links to the online fillable ATCC Express License, as well as a PDF version. 2) After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see [here](#). Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

*Commercial License*: Contact MSK’s Tangible Materials team at TRMOTDRTM@mskcc.org.

**MSK Tracking Code**: SK2010-070

---

**Licensing Information**: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
SK-OV-1: Human Ovarian Adenocarcinoma Cell Line (aka SK-OV-01)

Description
SK-OV-1 is a human ovarian cancer cell line.

Source
This cell line was established from an ovarian metastasis in a 65-year-old female with ovarian adenocarcinoma.

Lead Researcher/Research Laboratory
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

SK-OV-3: Human Ovarian Cancer Cell Line (ATCC Catalogue No. HTB-77)

Description
SK-OV-3 is a human ovarian cancer cell line with epithelial-like morphology. These cells are resistant to tumor necrosis factor and to other cytotoxic drugs such as diphtheria toxin, cisplatin, and adriamycin. The SK-OV-3 cell line forms colonies in soft agar, which serves as a surrogate assay for tumorigenicity. Intra-peritoneal injection of these cells into immunocompromised mice results in the growth of tumors resembling clear cell adenocarcinoma, within two to three months.

Source
This cell line was established in 1973 from the ascites of a 64-year-old Caucasian female with adenocarcinoma of the ovary.

Inventors
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research
- Germain Trempe, formerly at Sloan Kettering Institute, MSK

Key References
- Fogh J et al. (1977) One hundred and twenty-seven cultured human tumor cell lines producing tumors in nude mice. Journal of the National Cancer Institute 59: 221-226. PMID: 327080

Licensing Information
Express License: For internal research purposes by a for-profit entity: 1) Fill out MSK’s ATCC Express License; see here for links to the online fillable ATCC Express License, as well as a PDF version. 2) After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Materials team at TRMOTDRTM@mskcc.org.

MSK Tracking Code: SK1980-528
SK-OV-8: Human Ovarian Adenocarcinoma Cell Line (aka SK-OV-08)

Description
SK-OV-8 is a human ovarian cancer cell line.

Source
This cell line was established from an ovarian metastasis in a 54-year-old female with ovarian adenocarcinoma.

Lead Researcher/Research Laboratory
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

**Licensing Information:** Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
CELL LINES

Pancreatic Cancer

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
Capan-1: Human Pancreatic Adenocarcinoma Cell Line (ATCC Catalogue No. HTB-79)

Description
Capan-1 is a human pancreatic ductal adenocarcinoma cell line. These cells grow in adherent tissue culture and display epithelial morphology. In culture, these cells are capable of invading through an extracellular matrix, such as Matrigel. The Capan-1 cells are resistant to 5-fluorouracil, reminiscent of the original tumor from which they were derived. They form poorly-differentiated tumors when injected into immunocompromised mice. These cells harbor a single base-pair deletion in the BRCA2 allele, which results in the expression of a truncated and dysfunctional protein. In addition, they have an oncogenic mutation in K-Ras (G12V) and an inactivating mutation in p53. These cells express elevated levels of the Epidermal Growth Factor Receptor (EGFR) and do not express SMAD4 protein (i.e., SMAD4-null).

The Capan-1 cells are useful both as a xenograft model for pancreatic cancer and as a cell system to study the effects of BRCA2-deficiency.

Source
This cell line was established in 1974 from a metastatic site (liver) in a 40-year-old Caucasian male with pancreatic ductal adenocarcinoma.

Lead Inventor
- Jorgen Fogh, PhD, formerly at Sloan Kettering Institute, MSK

Key References
- Fogh J et al. (1977) One hundred and twenty-seven cultured human tumor cell lines producing tumors in nude mice. *Journal of the National Cancer Institute* 59: 221-226. PMID: 327080

Licensing Information
*Express License*: For internal research purposes by a for-profit entity: 1) Fill out MSK’s ATCC Express License; see [here](#) for links to the online fillable ATCC Express License, as well as a PDF version. 2) After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see [here](#). Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

*Commercial License*: Contact MSK’s Tangible Materials team at TRMOTDRTM@mskcc.org.

**MSK Tracking Code:** SK2000-049

License Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes.

MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.

Capan-2: Human Pancreatic Adenocarcinoma Cell Line (ATCC Catalogue No. HTB-80)

Description
Capan-2 is a human pancreatic ductal adenocarcinoma cell line. These cells grow in adherent tissue culture and display epithelial morphology. They form well-differentiated tumors when injected into immunocompromised mice and are used as a xenograft model for pancreatic cancer. The Capan-2 cells express mutant K-Ras (G12V) and elevated levels of the Epidermal Growth Factor Receptor (EGFR). In addition, they express wildtype p53 and normal levels of SMAD4 protein.

Source
This cell line was established in 1975 from the primary tumor of a 56-year-old Caucasian male with pancreatic ductal adenocarcinoma.

Inventors
- Jorgen Fogh, PhD, formerly at Sloan Kettering Institute, MSK
- James D. Loveless, formerly at Sloan Kettering Institute, MSK

Key References

Licensing Information
*Express License*: For internal research purposes by a for-profit entity: 1) Fill out MSK’s ATCC Express License; see [here](#) for links to the online fillable ATCC Express License, as well as a PDF version. 2) After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see [here](#). Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

*Commercial License*: Contact MSK’s Tangible Materials team at TRMOTDRTM@mskcc.org.

**MSK Tracking Code:** SK2000-049
CELL LINES

Renal Cancer
Caki-1: Human Renal Cancer Cell Line  
(ATCC Catalogue No. HTB-46)

Description
Caki-1 is a human clear cell renal cell carcinoma (ccRCC) line that displays epithelial morphology and grows in adherent culture. When grown on transwell filters, these cells form a polarized monolayer with microvilli on the apical surface and display characteristic features of the proximal tubule epithelium. In addition, the Caki-1 cells are also a useful model to study renal cancer. They are more sensitive to 5-fluorouracil and sorafenib (multi-kinase inhibitor of VEGFRs 1-3, PDGFR-b, and Raf-1) than the Caki-2 cells. The Caki-1 cells express wildtype von Hippel-Lindau (VHL) tumor-suppressor protein and are known to form tumors in immunocompromised mice.

Source
This cell line was established in 1971 from a metastatic site (skin) in a 49-year-old Caucasian male with clear cell carcinoma of the kidney.

Inventors
• Jorgen Fogh, PhD, formerly at Sloan Kettering Institute, MSK
• Germain Trempe, formerly at Sloan Kettering Institute, MSK

Key References
• Fogh J et al. (1977) One hundred and twenty-seven cultured human tumor cell lines producing tumors in nude mice. Journal of the National Cancer Institute 59: 221-226. PMID: 327080

Licensing Information
Express License: For internal research purposes by a for-profit entity: 1) Fill out MSK’s ATCC Express License; see here for links to the online fillable ATCC Express License, as well as a PDF version. 2) After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Materials team at TRMOTDRTM@mskcc.org.

MSK Tracking Code: SK1980-534

Caki-2: Human Renal Cancer Cell Line  
(ATCC Catalogue No. HTB-47)

Description
Caki-2 is a human clear cell renal cell carcinoma (ccRCC) line that displays epithelial morphology and grows in adherent culture. These cells are a useful preclinical model to study renal cancer. They are relatively less sensitive to 5-fluorouracil and sorafenib (multi-kinase inhibitor of VEGFRs 1-3, PDGFR-b, and Raf-1) compared to Caki-1 cells. The Caki-2 cells have a loss-of-function mutation in the von Hippel-Lindau (VHL) tumor-suppressor protein and are known to form tumors in immunocompromised mice.

Source
This cell line was established in 1971 from the primary tumor of a 69-year-old Caucasian male with clear cell carcinoma of the kidney.

Inventors
• Jorgen Fogh, PhD, formerly at Sloan Kettering Institute, MSK
• Germain Trempe, formerly at Sloan Kettering Institute, MSK

Key References
• Fogh J et al. (1977) One hundred and twenty-seven cultured human tumor cell lines producing tumors in nude mice. Journal of the National Cancer Institute 59: 221-226. PMID: 327080

Licensing Information
Express License: For internal research purposes by a for-profit entity: 1) Fill out MSK’s ATCC Express License; see here for links to the online fillable ATCC Express License, as well as a PDF version. 2) After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Materials team at TRMOTDRTM@mskcc.org.

MSK Tracking Code: SK2010-068

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
SK-RC-1: Human Renal Carcinoma Cell Line, Primary (aka SK-RC-01)

Description
SK-RC-1 is a stage II primary renal carcinoma cell line that grows in nude mice and has a doubling time of 42 hours.

This cell line is from a collection of renal cell carcinoma (RCC) cell lines derived from the primary tumors of patients who underwent surgery. For the complete panel, see SK-RC-(P): Primary Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

Source
This cell line was established from a 41-year-old male, of unknown ethnicity, with clear cell renal cell carcinoma derived from perinodal adipose tissue.

All cell lines were established in Dr. Lloyd Old’s laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

Lead Inventor
• Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

Key References
• Ebert T et al. (1990) Establishment and characterization of human renal cancer and normal kidney cell lines. Cancer research, 50(17), 5531-5536. PMID: 2386958
• Houghton A et al. (1983) Detection of cell surface and intracellular antigens by human monoclonal antibodies. Hybrid cell lines derived from lymphocytes of patients with malignant melanoma. The journal of experimental medicine, 158(1), 53-65. PMID: 6864164
• Ueda R et al. (1979) Cell surface antigens of human renal cancer defined by autologous typing. The journal of experimental medicine, 150(3), 564-579. PMID: 479762

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Cellosaurus code: RRID: CVCL_4017

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
SK-RC-2: Human Renal Adenocarcinoma Cell Line, Primary (aka SK-RC-02)

Description
SK-RC-2 is a stage IV primary renal adenocarcinoma cell line derived from the kidney that grows in nude mice and has a doubling time of 60 hours. This cell line is from a collection of renal cell carcinoma (RCC) cell lines derived from the primary tumors of patients who underwent surgery. For the complete panel, see SK-RC-(P): Primary Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

Source
This cell line was established from a 59-year-old male of unknown ethnicity. All cell lines were established in Dr. Lloyd Old's laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

Lead Inventor
• Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

Key References
• Ebert T et al. (1990) Establishment and characterization of human renal cancer and normal kidney cell lines. Cancer research, 50(17), 5531-5536. PMID: 2386958
• Houghton A et al. (1983) Detection of cell surface and intracellular antigens by human monoclonal antibodies. Hybrid cell lines derived from lymphocytes of patients with malignant melanoma. The journal of experimental medicine, 158(1), 53-65. PMID: 6864164

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK's Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.
Commercial License: Contact MSK's Tangible Research Materials team at TRMOTDRTM@mskcc.org.
For non-licensing requests from academic-research institutions: Contact MSK's Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Cellosaurus code: RRID: CVCL_6169
SK-RC-4: Human Renal Cancer Cell Line, Primary (aka SK-RC-04)

Description
SK-RC-4 is a stage II primary renal cancer cell line. This cell line is from a collection of renal cell carcinoma (RCC) cell lines derived from the primary tumors of patients who underwent surgery. For the complete panel, see SK-RC-(P): Primary Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

Source
This cell line was established from a 48-year-old male, of unknown ethnicity, with renal cell carcinoma derived from the humerus bone. All cell lines were established in Dr. Lloyd Old’s laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

Lead Inventor
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

Key References
- Ebert T et al. (1990) Establishment and characterization of human renal cancer and normal kidney cell lines. Cancer research, 50(17), 5531-5536. PMID: 2386958
- Ueda R et al. (1979) Cell surface antigens of human renal cancer defined by autologous typing. The journal of experimental medicine, 150(3), 564-579. PMID: 479762

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Cellosaurus code: RRID: CVCL_6171
SK-RC-6: Human Renal Adenocarcinoma Cell Line, Primary (aka SK-RC-06)

Description
SK-RC-6 is stage II primary renal adenocarcinoma cell line that grows in both nude mice and soft agar and has a doubling time of 60 hours.

This cell line is from a collection of renal cell carcinoma (RCC) cell lines derived from the primary tumors of patients who underwent surgery. For the complete panel, see SK-RC-(P): Primary Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

Source
This cell line was established from a 72-year-old male, of unknown ethnicity, with renal cell carcinoma derived from the kidney.

All cell lines were established in Dr. Lloyd Old's laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

Lead Inventor
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

Key References
- Ebert T et al. (1990) Establishment and characterization of human renal cancer and normal kidney cell lines. Cancer research, 50(17), 5531-5536. PMID: 2386958
- Houghton A et al. (1983) Detection of cell surface and intracellular antigens by human monoclonal antibodies. Hybrid cell lines derived from lymphocytes of patients with malignant melanoma. The journal of experimental medicine, 158(1), 53-65. PMID: 6864164
- Ueda R et al. (1979) Cell surface antigens of human renal cancer defined by autologous typing. The journal of experimental medicine, 150(3), 564-579. PMID: 479762

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.
Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.
For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.
Cellosaurus code: RRID: CVCL_4023

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK's tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
SK-RC-7: Human Renal Clear Cell Carcinoma Cell Line, Primary (aka SK-RC-07)

Description
SK-RC-7 is a stage II primary clear cell renal cancer cell line. This cell line is from a collection of renal cell carcinoma (RCC) cell lines derived from the primary tumors of patients who underwent surgery. For the complete panel, see SK-RC-(P): Primary Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

Source
This cell line was established from a 63-year-old male, of unknown ethnicity, with clear cell renal cell carcinoma derived from the kidney. All cell lines were established in Dr. Lloyd Old’s laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

Lead Inventor
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

Key References
- Brodaczewska K et al. (2016) Choosing the right cell line for renal cell cancer research. Molecular cancer, 15(1), 83. PMID: 27993170
- Ebert T et al. (1990) Establishment and characterization of human renal cancer and normal kidney cell lines. Cancer research, 50(17), 5531-5536. PMID: 2386958
- Knuth A et al. (1989) Cytolytic T-cell clones against an autologous human melanoma: specificity study and definition of three antigens by immunoselection. Proceedings of the National Academy of Sciences of the Unites States of America, 86(8), 2904-2908. PMID: 2784858

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.
Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.
For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.
Cellosaurus code: RRID: CVCL_4024

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
**SK-RC-8: Human Renal Clear Cell Carcinoma Cell Line, Primary (aka SK-RC-08)**

**Description**
SK-RC-8 is a stage IV primary renal clear cell carcinoma cell line. This cell line is from a collection of renal cell carcinoma (RCC) cell lines derived from the primary tumors of patients who underwent surgery. For the complete panel, see SK-RC-(P): Primary Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

**Source**
This cell line was established from a 47-year-old male, of unknown ethnicity, with clear cell renal carcinoma derived from the adrenal gland. All cell lines were established in Dr. Lloyd Old’s laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

**Lead Inventor**
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

**Key References**
- Ebert T et al. (1990) Establishment and characterization of human renal cancer and normal kidney cell lines. *Cancer research*, 50(17), 5531-5536. PMID: 2386958

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: Fill out MSK's Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

**For non-licensing requests from academic-research institutions:** Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

**Cellosaurus code:** RRID: CVCL_6173
SK-RC-9: Human Renal Carcinoma Cell Line, Metastatic (aka SK-RC-09)

Description
SK-RC-9 is a stage IV metastatic renal carcinoma cell line derived from the lung, which grows in soft agar.

This cell line is part of a collection of renal cell carcinoma (RCC) cell lines derived from metastatic sites of patients who underwent surgery. For the complete panel, see SK-RC-(M): Metastatic Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

Source
This cell line was established from a 56-year-old male, of unknown ethnicity, with renal cell carcinoma derived from the brain.

All cell lines were established in Dr. Lloyd Old’s laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

Lead Inventor
• Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

Key References
• Brodaczewska K et al. (2016) Choosing the right cell line for renal cell cancer research. Molecular cancer, 15(1), 83. PMID: 27993770
• Ebert T et al. (1990) Establishment and characterization of human renal cancer and normal kidney cell lines. Cancer research, 50(17), 5531-5536. PMID: 2386958
• Houghton A et al. (1983) Detection of cell surface and intracellular antigens by human monoclonal antibodies. Hybrid cell lines derived from lymphocytes of patients with malignant melanoma. The journal of experimental medicine, 158(1), 53-65. PMID: 6864164
• Ueda R et al. (1979) Cell surface antigens of human renal cancer defined by autologous typing. The journal of experimental medicine, 150(3), 564-579. PMID: 479762

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDR@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Cellosaurus code: RRID: CVCL_6174

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDR@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
**SK-RC-10: Human Renal Cancer Cell Line, Primary**

**Description**
SK-RC-10 is a primary renal cancer cell line. This cell line is from a collection of renal cell carcinoma (RCC) cell lines derived from the primary tumors of patients who underwent surgery. For the complete panel, see SK-RC-(P): Primary Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

**Source**
This cell line was established from a 63-year-old male of unknown ethnicity, with renal cell carcinoma derived from the kidney.

All cell lines were established in Dr. Lloyd Old’s laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

**Lead Inventor**
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

**Key References**
- Brodaczewska K et al. (2016) Choosing the right cell line for renal cell cancer research. *Molecular cancer*, 15(1), 83. PMID: 27993170

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions:
Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Cellosaurus code: RRID: CVCL_6175
SK-RC-11: Human Renal Cancer Cell Line, Primary

Description
SK-RC-11 is a primary renal cell line. This cell line is from a collection of renal cell carcinoma (RCC) cell lines derived from the primary tumors of patients who underwent surgery. For the complete panel, see SK-RC-(P): Primary Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

Source
This cell line was established from a 60-year-old male, of unknown ethnicity, with renal cell carcinoma.

All cell lines were established in Dr. Lloyd Old’s laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

Lead Inventor
• Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

Key References
• Knuth A et al. (1989) Cytolytic T-cell clones against an autologous human melanoma: specificity study and definition of three antigens by immunoselection. Proceedings of the National Academy of Sciences of the United States of America, 86(8), 2904-2808. PMID: 2784858
• Houghton A et al. (1983) Detection of cell surface and intracellular antigens by human monoclonal antibodies. Hybrid cell lines derived from lymphocytes of patients with malignant melanoma. The journal of experimental medicine, 158(1), 53-65. PMID: 6864164
• Mayet W et al. (1991) A human renal cancer line as a new antigen source for the detection of antibodies to cytoplasmic and nuclear antigens in sera of patients with Wegener’s granulomatosis. Journal of immunological methods, 143(1), 57-68. PMID: 1717605
• Ueda R et al. (1979) Cell surface antigens of human renal cancer defined by autologous typing. The journal of experimental medicine, 150(3), 564-579. PMID: 479762

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Cellosaurus code: RRID: CVCL_6176

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
SK-RC-12: Human Renal Clear Cell, Cortical Carcinoma Cell Line, Primary

Description
SK-RC-12 is a primary renal clear cell cortical carcinoma cell line. This cell line is from a collection of renal cell carcinoma (RCC) cell lines derived from the primary tumors of patients who underwent surgery. For the complete panel, see SK-RC-(P): Primary Human Renal Carcinoma (RCC) Cell Line Portfolio.

Source
This cell line was established from a 68-year-old male, of unknown ethnicity, with renal cell carcinoma derived from the adrenal gland.

All cell lines were established in Dr. Lloyd Old’s laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

Lead Inventor
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

Key References
- Ebert T et al. (1990) Establishment and characterization of human renal cancer and normal kidney cell lines. Cancer research, 50(17), 5531-5536. PMID: 2386958
- Ueda R et al. (1979) Cell surface antigens of human renal cancer defined by autologous typing. The journal of experimental medicine, 150(3), 564-579. PMID: 479762

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this workflow, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Cellosaurus code: RRID: CVCL_6177

SK-RC-13: Human Renal Cancer Cell Line, Metastatic

Description
SK-RC-13 is a metastatic renal cancer cell line derived from the brain which grows in nude mice.

This is cell line is part of a collection of renal cell carcinoma (RCC) cell lines derived from metastatic sites of patients who underwent surgery. For the complete panel, see SK-RC-(M): Metastatic Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

Source
This cell line was established from a 63-year-old male of unknown ethnicity with renal cell carcinoma.

All cell lines were established in Dr. Lloyd Old’s laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

Lead Inventor
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

Key References
- Ebert T et al. (1990) Establishment and characterization of human renal cancer and normal kidney cell lines. Cancer research, 50(17), 5531-5536. PMID: 2386958
- Ueda R et al. (1979) Cell surface antigens of human renal cancer defined by autologous typing. The journal of experimental medicine, 150(3), 564-579. PMID: 479762

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this workflow, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Cellosaurus code: RRID: CVCL_6178
SK-RC-14: Human Renal Cancer Cell Line, Primary

Description
SK-RC-14 is a primary renal cancer cell line. This cell line is from a collection of renal cell carcinoma (RCC) cell lines derived from the primary tumors of patients who underwent surgery. For the complete panel, see SK-RC-(P): Primary Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

Source
This cell line was established from a 63-year-old male of unknown ethnicity with renal cell carcinoma.

All cell lines were established in Dr. Lloyd Old’s laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

Lead Inventor
• Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions:
Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Cellosaurus code: RRID: CVCL_6179

SK-RC-15: Human Renal Clear Cell, Cortical Carcinoma Cell Line, Primary

Description
SK-RC-15 is a primary renal clear cell adenocarcinoma cell line that grows in nude mice and was derived from the kidney. This cell line is from a collection of renal cell carcinoma (RCC) cell lines derived from the primary tumors of patients who underwent surgery. For the complete panel, see SK-RC-(P): Primary Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

Source
This cell line was established from a 68-year-old male of unknown ethnicity with clear cell renal carcinoma.

All cell lines were established in Dr. Lloyd Old’s laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

Lead Inventor
• Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

Key References
• Ebert T et al. (1990) Establishment and characterization of human renal cancer and normal kidney cell lines. Cancer research, 50(17), 5531-5536. PMID: 2386958

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions:
Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Cellosaurus code: RRID: CVCL_6180

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
SK-RC-16: Human Renal Cancer Cell Line, Primary

Description
SK-RC-16 is a primary renal cancer cell line.
This cell line is from a collection of renal cell carcinoma (RCC) cell lines derived from the primary tumors of patients who underwent surgery. For the complete panel, see SK-RC-(P): Primary Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

Source
This cell line was established from a 56-year-old male of unknown ethnicity with renal cell carcinoma.
All cell lines were established in Dr. Lloyd Old’s laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

Lead Inventor
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Cellosaurus code: RRID: CVCL_GS24

SK-RC-17: Human Renal Cancer Cell Line, Metastatic

Description
SK-RC-17 is a metastatic renal cancer cell line derived from the soft tissue of the abdominal wall which grows in nude mice.
This is cell line is part of a collection of renal cell carcinoma (RCC) cell lines derived from metastatic sites of patients who underwent surgery. For the complete panel, see SK-RC-(M): Metastatic Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

Source
This cell line was established from a male of unknown age and ethnicity with renal cell carcinoma.
All cell lines were established in Dr. Lloyd Old’s laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

Lead Inventor
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

Key References
- Brodaczewska K et al. (2016) Choosing the right cell line for renal cell cancer research. Molecular cancer, 15(1), 83. PMID: 27993170
- Ebert T et al. (1990) Establishment and characterization of human renal cancer and normal kidney cell lines. Cancer research, 50(17), 5531-5536. PMID: 2386958

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Cellosaurus code: RRID: CVCL_4018
SK-RC-18: Human Renal Clear Cell Carcinoma Cell Line, Metastatic

Description
SK-RC-18 is a metastatic renal clear cell carcinoma cell line derived from the cervical lymph node which grows in both nude mice and soft agar. This cell line is part of a collection of renal cell carcinoma (RCC) cell lines derived from metastatic sites of patients who underwent surgery. For the complete panel, see SK-RC-(M): Metastatic Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

Source
This cell line was established from a 32-year-old male of unknown ethnicity with renal cell carcinoma. All cell lines were established in Dr. Lloyd Old’s laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

Lead Inventor
• Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

Key References
• Brodaczewska K et al. (2016) Choosing the right cell line for renal cell cancer research. Molecular cancer, 15(1), 83. PMID: 27993170
• Ebert T et al. (1990) Establishment and characterization of human renal cancer and normal kidney cell lines. Cancer research, 50(17), 5531-5536. PMID: 2386958
• Knuth A et al. (1989) Cytolytic T-cell clones against an autologous human melanoma: specificity study and definition of three antigens by immunoselection. Proceedings of the National Academy of Sciences of the United States of America, 86(8), 2904-2808. PMID: 2784858

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Cellosaurus code: RRID: CVCL_6181

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
**SK-RC-20: Human Renal Cancer Cell Line, Primary**

**Description**
SK-RC-20 is a primary renal cancer cell line with a doubling time of 55 hours. This cell line is from a collection of renal cell carcinoma (RCC) cell lines derived from the primary tumors of patients who underwent surgery. For the complete panel, see SK-RC-(P): Primary Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

**Source**
This cell line was established from a 46-year-old male of unknown ethnicity with renal cell carcinoma.

All cell lines were established in Dr. Lloyd Old's laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

**Lead Inventor**
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

**Key References**

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: Fill out MSK's Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK's Tangible Research Materials team at TRMOTDRTM@mskcc.org. For non-licensing requests from academic-research institutions: Contact MSK's Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

**Cellosaurus code:** RRID: CVCL_V605

---

**SK-RC-21: Human Renal Cancer Cell Line, Metastatic**

**Description**
SK-RC-21 is a metastatic renal cancer cell line derived from the lumbar vertebra which grows in soft agar and has a doubling time of 38 hours. This is cell line is part of a collection of renal cell carcinoma (RCC) cell lines derived from metastatic sites of patients who underwent surgery. For the complete panel, see SK-RC-(M): Metastatic Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

**Source**
This cell line was established from a 59-year-old male of unknown ethnicity with renal cell carcinoma.

All cell lines were established in Dr. Lloyd Old's laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

**Lead Inventor**
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

**Key References**
- Brodaczeska K et al. (2016) Choosing the right cell line for renal cell cancer research. *Molecular cancer*, 15(1), 83. PMID: 27993170
- Ebert T et al. (1990) Establishment and characterization of human renal cancer and normal kidney cell lines. *Cancer research*, 50(17), 5531-5536. PMID: 2386958

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: Fill out MSK's Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK's Tangible Research Materials team at TRMOTDRTM@mskcc.org. For non-licensing requests from academic-research institutions: Contact MSK's Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

**Cellosaurus code:** RRID: CVCL_6182

---

**Licensing Information:** Corporations and other for-profit entities may nonexclusively license MSK's tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
**SK-RC-22: Human Renal Cancer Cell Line, Primary**

**Description**
SK-RC-22 is a primary renal cancer cell line.

This cell line is from a collection of renal cell carcinoma (RCC) cell lines derived from the primary tumors of patients who underwent surgery. For the complete panel, see SK-RC-(P): Primary Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

**Source**
This cell line was established from a 78-year-old male of unknown ethnicity with renal cell carcinoma.

All cell lines were established in Dr. Lloyd Old’s laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

**Lead Inventor**
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

**Licensing Information**

**Express License:** For internal research purposes by a for-profit entity: Fill out MSK's Core Express License; see [here](#) for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see [here](#). Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK's Tangible Research Materials team at [TRMOTDRTM@mskcc.org](mailto:TRMOTDRTM@mskcc.org).

For non-licensing requests from academic-research institutions:
Contact MSK's Antibody & Bioresource Core Facility at [skiabcf@mskcc.org](mailto:skiabcf@mskcc.org).

**Cellosaurus code:** RRID: CVCL_VR18

---

**SK-RC-24: Human Renal Cancer Cell Line, Primary**

**Description**
SK-RC-24 is a primary renal cancer cell line.

This cell line is from a collection of renal cell carcinoma (RCC) cell lines derived from the primary tumors of patients who underwent surgery. For the complete panel, see SK-RC-(P): Primary Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

**Source**
This cell line was established from a 37-year-old male of unknown ethnicity with renal cell carcinoma.

All cell lines were established in Dr. Lloyd Old’s laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

**Lead Inventor**
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

**Licensing Information**

**Express License:** For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see [here](#) for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see [here](#). Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK’s Tangible Research Materials team at [TRMOTDRTM@mskcc.org](mailto:TRMOTDRTM@mskcc.org).

For non-licensing requests from academic-research institutions:
Contact MSK’s Antibody & Bioresource Core Facility at [skiabcf@mskcc.org](mailto:skiabcf@mskcc.org).

**Cellosaurus code:** RRID: CVCL_VR19
**SK-RC-25: Human Renal Cancer Cell Line, Primary**

**Description**
SK-RC-25 is a primary renal cancer cell line. This cell line is from a collection of renal cell carcinoma (RCC) cell lines derived from the primary tumors of patients who underwent surgery. For the complete panel, see SK-RC-(P): Primary Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

**Source**
This cell line was established from a female of unknown age and ethnicity with renal cell carcinoma. All cell lines were established in Dr. Lloyd Old's laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

**Lead Inventor**
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

**Licensing Information**

**Express License:** For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions:
Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

**Cellosaurus code:** RRID: CVCL_VR20

---

**SK-RC-26: Human Renal Cancer Cell Line, Primary**

**Description**
SK-RC-26 is a primary renal cancer cell line. This cell line is from a collection of renal cell carcinoma (RCC) cell lines derived from the primary tumors of patients who underwent surgery. For the complete panel, see SK-RC-(P): Primary Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

**Source**
This cell line was established from a 58-year-male of unknown ethnicity. All cell lines were established in Dr. Lloyd Old's laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

**Lead Inventor**
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

**Licensing Information**

**Express License:** For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions:
Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

**Cellosaurus code:** RRID: CVCL_VR20

---

**Licensing Information:** Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
**SK-RC-26a: Human Renal Cancer Cell Line, Metastatic**

**Description**
SK-RC-26a is a metastatic renal cancer cell line derived from the lung. This cell line is part of a collection of renal cell carcinoma (RCC) cell lines derived from metastatic sites of patients who underwent surgery. For the complete panel, see SK-RC-(M): Metastatic Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

**Source**
This cell line was established from a 58-year-old male of unknown ethnicity with renal cell carcinoma.

All cell lines were established in Dr. Lloyd Old's laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

**Lead Inventor**
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

**Key References**
- Brodaczewska K et al. (2016) Choosing the right cell line for renal cell cancer research. *Molecular cancer*, 15(1), 83. PMID: 27993170
- Ebert T et al. (1990) Establishment and characterization of human renal cancer and normal kidney cell lines. *Cancer research*, 50(17), 5531-5536. PMID: 2386958

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: Fill out MSK's Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

**For non-licensing requests from academic-research institutions:** Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

**Cellosaurus code:** RRID: CVCL_6183

---

**SK-RC-26b: Human Renal Cancer Cell Line, Metastatic**

**Description**
SK-RC-26b is a metastatic renal cancer cell line derived from the lymph node. This cell line is part of a collection of renal cell carcinoma (RCC) cell lines derived from metastatic sites of patients who underwent surgery. For the complete panel, see SK-RC-(M): Metastatic Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

**Source**
This cell line was established from a 58-year-old male of unknown ethnicity with renal cell carcinoma.

All cell lines were established in Dr. Lloyd Old's laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

**Lead Inventor**
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

**Key References**
- Brodaczewska K et al. (2016) Choosing the right cell line for renal cell cancer research. *Molecular cancer*, 15(1), 83. PMID: 27993170
- Ebert T et al. (1990) Establishment and characterization of human renal cancer and normal kidney cell lines. *Cancer research*, 50(17), 5531-5536. PMID: 2386958

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: Fill out MSK's Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

**For non-licensing requests from academic-research institutions:** Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

**Cellosaurus code:** RRID: CVCL_3120

---

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
SK-RC-28: Human Renal Clear Cell Adenocarcinoma Cell Line, Primary

Description
SK-RC-28 is a primary renal clear cell adenocarcinoma cell line derived from the kidney and grows in soft agar.

This cell line is from a collection of renal cell carcinoma (RCC) cell lines derived from the primary tumors of patients who underwent surgery. For the complete panel, see SK-RC-(P): Primary Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

Source
This cell line was established from a 51-year-old female of unknown ethnicity with renal cell carcinoma.

All cell lines were established in Dr. Lloyd Old’s laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

Lead Inventor
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

Key References
- Ebert T et al. (1990) Establishment and characterization of human renal cancer and normal kidney cell lines. Cancer research, 50(17), 5531-5536. PMID: 2386958
- Houghton A et al. (1983) Detection of cell surface and intracellular antigens by human monoclonal antibodies. Hybrid cell lines derived from lymphocytes of patients with malignant melanoma. The journal of experimental medicine, 158(1), 53-65. PMID: 6864164

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Cellosaurus code: RRID: CVCL_6184

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
SK-RC-30: Human Renal Cancer Cell Line, Primary

Description
SK-RC-30 is a primary renal cancer cell line. This cell line is from a collection of renal cell carcinoma (RCC) cell lines derived from the primary tumors of patients who underwent surgery. For the complete panel, see SK-RC-(P): Primary Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

Source
This cell line was established from a 74-year-old female of unknown ethnicity with renal cell carcinoma.

All cell lines were established in Dr. Lloyd Old's laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

Lead Inventor
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK's Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions:
Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Cellosaurus code: RRID: CVCL_6185
SK-RC-31: Human Renal Cancer Cell Line, Metastatic

Description
SK-RC-31 is a metastatic renal cancel cell line derived from the lung which grows in both nude mice and soft agar. This is cell line is part of a collection of renal cell carcinoma (RCC) cell lines derived from metastatic sites of patients who underwent surgery. For the complete panel, see SK-RC-(M): Metastatic Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

Source
This cell line was established from a male of unknown age and ethnicity with renal cell carcinoma. All cell lines were established in Dr. Lloyd Old's laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

Lead Inventor
• Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

Key References
• Brodaczewska K et al. (2016) Choosing the right cell line for renal cell cancer research. Molecular cancer, 15(1), 83. PMID: 27993170
• Cowley G et al. (2014) Parallel genome-scale loss of function screens in 216 cancer cell lines for the identification of context-specific genetic dependencies. Scientific data, 1, 140035. PMID: 25984343
• Ebert T et al. (1990) Establishment and characterization of human renal cancer and normal kidney cell lines. Cancer research, 50(17), 5531-5536. PMID: 2386958

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK's Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.
Commercial License: Contact MSK's Tangible Research Materials team at TRMOTDRTM@mskcc.org.
For non-licensing requests from academic-research institutions: Contact MSK's Antibody & Bioresource Core Facility at skiabcf@mskcc.org.
Cellosaurus code: RRID: CVCL_6186

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
SK-RC-34: Human Renal Cancer Cell Line, Primary

Description
SK-RC-34 is a primary renal cancer cell line.

This cell line is from a collection of renal cell carcinoma (RCC) cell lines derived from the primary tumors of patients who underwent surgery. For the complete panel, see SK-RC-(P): Primary Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

Source
This cell line was established from a 66-year-old male of unknown ethnicity with renal cell carcinoma.

All cell lines were established in Dr. Lloyd Old’s laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

Lead Inventor
• Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions:
Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Cellosaurus code: RRID: CVCL_VR21

SK-RC-36: Human Renal Cancer Cell Line, Metastatic

Description
SK-RC-36 is a metastatic renal cancer cell line derived from the hypodermis of the femoral neck.

This cell line is part of a collection of renal cell carcinoma (RCC) cell lines derived from metastatic sites of patients who underwent surgery. For the complete panel, see SK-RC-(M): Metastatic Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

Source
This cell line was established from a 65-year-old male of unknown ethnicity with renal cell carcinoma.

All cell lines were established in Dr. Lloyd Old’s laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

Lead Inventor
• Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions:
Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Cellosaurus code: RRID: CVCL_VR22

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
**SK-RC-37: Human Renal Cancer Cell Line, Primary**

**Description**
SK-RC-37 is a primary renal cancer cell line which grows in nude mice. This cell line is from a collection of renal cell carcinoma (RCC) cell lines derived from the primary tumors of patients who underwent surgery. For the complete panel, see SK-RC-(P): Primary Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

**Source**
This cell line was established from a male of unknown age and ethnicity with renal cell carcinoma.

All cell lines were established in Dr. Lloyd Old’s laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

**Lead Inventor**
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

**Key References**
- Ebert T et al. (1990) Establishment and characterization of human renal cancer and normal kidney cell lines. Cancer research, 50(17), 5531-5536. PMID: 2386958

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see [here](#) for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see [here](#). Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

**For non-licensing requests from academic-research institutions:** Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

**Cellosaurus code:** RRID: CVCL_6188

---

**SK-RC-38: Human Renal Clear Cell Carcinoma Cell Line, Metastatic**

**Description**
SK-RC-38 is a metastatic renal clear cell cancer derived from the lung which grows in both nude mice and soft agar. This cell line is part of a collection of renal cell carcinoma (RCC) cell lines derived from metastatic sites of patients who underwent surgery. For the complete panel, see SK-RC-(M): Metastatic Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

**Source**
This cell line was established from a male of unknown age and ethnicity with renal cell carcinoma.

All cell lines were established in Dr. Lloyd Old’s laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

**Lead Inventor**
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

**Key References**
- Brodaczewska K et al. (2016) Choosing the right cell line for renal cell cancer research. Molecular cancer, 15(1), 83. PMID: 27993170
- Ebert T et al. (1990) Establishment and characterization of human renal cancer and normal kidney cell lines. Cancer research, 50(17), 5531-5536. PMID: 2386958
- Houghton A et al. (1983) Detection of cell surface and intracellular antigens by human monoclonal antibodies. Hybrid cell lines derived from lymphocytes of patients with malignant melanoma. The journal of experimental medicine, 158(1), 53-65. PMID: 6864164

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see [here](#) for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see [here](#). Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

**For non-licensing requests from academic-research institutions:** Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

**Cellosaurus code:** RRID: CVCL_6189

---

**Licensing Information:** Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
SK-RC-45: Human Renal Cancer Cell Line, Metastatic

Description
SK-RC-45 is a metastatic renal cancer cell line derived from the adrenal gland which grows in both nude mice and soft agar and has a doubling time of 48 hours.

This cell line is part of a collection of renal cell carcinoma (RCC) cell lines derived from metastatic sites of patients who underwent surgery. For the complete panel, see SK-RC-(M): Metastatic Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

Source
This cell line was established from a 48-year-old male of unknown ethnicity with clear cell renal cell carcinoma.

All cell lines were established in Dr. Lloyd Old's laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

Lead Inventor
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

Key References
- Brodzaczewska K et al. (2016) Choosing the right cell line for renal cell cancer research. Molecular cancer, 15(1), 83. PMID: 27993170
- Ebert T et al. (1990) Establishment and characterization of human renal cancer and normal kidney cell lines. Cancer research, 50(17), 5531-5536. PMID: 2386958
- Kudo D et al. (2003) Gangliosides expressed by the renal cell carcinoma cell line SK-RC-45 are involved in tumor-induced apoptosis of T cells. Cancer research, 63(7), 1676-1683. PMID: 12670922

Licensing Information
Express License: For internal research purposes by a for-profit entity; Fill out MSK's Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK's Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK's Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Cellosaurus code: RRID: CVCL_4016
SK-RC-48: Human Renal Cancer Cell Line, Primary

Description
SK-RC-48 is a primary renal cancer cell line which grows in nude mice. This cell line is from a collection of renal cell carcinoma (RCC) cell lines derived from the primary tumors of patients who underwent surgery. For the complete panel, see SK-RC-(P): Primary Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

Source
This cell line was established from a 73-year-old male of unknown ethnicity with clear cell renal cell carcinoma. All cell lines were established in Dr. Lloyd Old’s laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

Lead Inventor
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

Key References
- Ebert T et al. (1990) Establishment and characterization of human renal cancer and normal kidney cell lines. Cancer research, 50(17), 5531-5536. PMID: 2386958

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org. For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Cellosaurus code: RRID: CVCL_6195

SK-RC-52: Human Renal Cancer Cell Line, Metastatic

Description
SK-RC-52 is a metastatic renal cancer cell line derived from the mediastinum which grows in both nude mice and soft agar and has a doubling time of 36 hours. This cell line is part of a collection of renal cell carcinoma (RCC) cell lines derived from metastatic sites of patients who underwent surgery. For the complete panel, see SK-RC-(M): Metastatic Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

Source
This cell line was established from a 61-year-old female of unknown ethnicity with renal cell carcinoma. All cell lines were established in Dr. Lloyd Old’s laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

Lead Inventor
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

Key References
- Brodaczezwksa K et al. (2016) Choosing the right cell line for renal cell cancer research. Molecular cancer, 15(1), 83. PMID: 27993170
- Ebert T et al. (1990) Establishment and characterization of human renal cancer and normal kidney cell lines. Cancer research, 50(17), 5531-5536. PMID: 2386958

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org. For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Cellosaurus code: RRID: CVCL_6198
SK-RC-54: Human Renal Adenocarcinoma Cell Line, Metastatic

Description
SK-RC-54 is a metastatic renal adenocarcinoma cell line derived from the lung. This cell line is part of a collection of renal cell carcinoma (RCC) cell lines derived from metastatic sites of patients who underwent surgery. For the complete panel, see SK-RC-(M): Metastatic Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

Source
This cell line was established from a 64-year-old male of unknown ethnicity with renal cell carcinoma.

All cell lines were established in Dr. Lloyd Old's laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

Lead Inventor
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

Key References
- Brodaczewska K et al. (2016) Choosing the right cell line for renal cell cancer research. Molecular cancer, 15(1), 83. PMID: 27993170
- Ebert T et al. (1990) Establishment and characterization of human renal cancer and normal kidney cell lines. Cancer research, 50(17), 5531-5536. PMID: 2386958

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK's Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK's Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK's Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Cellosaurus code: RRID: CVCL_6200

SK-RC-56: Human Renal Cancer Cell Line, Primary

Description
SK-RC-56 is a primary renal cancer cell line which grows in both nude mice and soft agar and has a doubling time of 48 hours. This cell line is from a collection of renal cell carcinoma (RCC) cell lines derived from the primary tumors of patients who underwent surgery. For the complete panel, see SK-RC-(P): Primary Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

Source
This cell line was established from a 66-year-old male of unknown ethnicity with renal cell carcinoma.

All cell lines were established in Dr. Lloyd Old's laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

Lead Inventor
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

Key References
- Ebert T et al. (1990) Establishment and characterization of human renal cancer and normal kidney cell lines. Cancer research, 50(17), 5531-5536. PMID: 2386958

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK's Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK's Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK's Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Cellosaurus code: RRID: CVCL_6203
SK-RC-61: Human Renal Cancer Cell Line, Primary

Description
SK-RC-61 is a primary renal cancer cell line which grows in both nude mice and soft agar and has a doubling time of 48 hours.

This cell line is from a collection of renal cell carcinoma (RCC) cell lines derived from the primary tumors of patients who underwent surgery. For the complete panel, see SK-RC-(P): Primary Human Renal Cell Carcinoma (RCC) Cell Line Portfolio.

Source
This cell line was established from a 53-year-old male of unknown ethnicity with renal cell carcinoma.

All cell lines were established in Dr. Lloyd Old’s laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

Lead Inventor
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

Key References
- Ebert T et al. (1990) Establishment and characterization of human renal cancer and normal kidney cell lines. Cancer research, 50(17), 5531-5536. PMID: 2386958

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Cellosaurus code: RRID: CVCL_6208
**SK-RC-(M): Metastatic Human Renal Cell Carcinoma (RCC) Cell Line Portfolio**

**Description**

This is a portfolio of renal cell carcinoma (RCC) cell lines derived from metastatic sites of patients who underwent surgery.

See chart for additional information.

**Source**

All cell lines were established in Dr. Lloyd Old’s laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

**Lead Inventor**

- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

**Key References**


**Comments**

Cell lines may be licensed individually or in any preferred combination.

**Licensing Information**

**Express License:** For internal research purposes by a for-profit entity; Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

**For non-licensing requests from academic-research institutions:** Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

---

### Metastatic Human Renal Cell Carcinoma Cell Line Portfolio

<table>
<thead>
<tr>
<th>Cell Line</th>
<th>Metastatic Site</th>
<th>Growth in Nude Mice</th>
<th>Growth in Soft Agar</th>
</tr>
</thead>
<tbody>
<tr>
<td>SK-RC-9 (aka 09)</td>
<td>Lung</td>
<td>x</td>
<td>√</td>
</tr>
<tr>
<td>SK-RC-13*</td>
<td>Brain</td>
<td>√</td>
<td>X</td>
</tr>
<tr>
<td>SK-RC-17</td>
<td>Soft tissue, abdominal wall</td>
<td>√</td>
<td>n.d.</td>
</tr>
<tr>
<td>SK-RC-18</td>
<td>Lymph node</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>SK-RC-21</td>
<td>Bone, lumbar vertabra</td>
<td>x</td>
<td>√</td>
</tr>
<tr>
<td>SK-RC-26a*</td>
<td>Lung</td>
<td>n.d.</td>
<td>n.d.</td>
</tr>
<tr>
<td>SK-RC-26b*</td>
<td>Lymph node</td>
<td>n.d.</td>
<td>n.d.</td>
</tr>
<tr>
<td>SK-RC-31</td>
<td>Lung</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>SK-RC-36</td>
<td>Soft tissue, femoral neck</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>SK-RC-38</td>
<td>Lung</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>SK-RC-45*</td>
<td>Adrenal gland</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>SK-RC-52</td>
<td>Mediastinum</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>SK-RC-54</td>
<td>Lung</td>
<td>n.d.</td>
<td>n.d.</td>
</tr>
</tbody>
</table>

* A cell line established from the primary tumor of the same patient is available. Please contact us for more details.

Key: x = No; √ = Yes; n.d. = Not Determined; n.a. = Information not available

**SK-RC-(P): Primary Human Renal Cell Carcinoma (RCC) Cell Line Portfolio**

**Description**
This is a portfolio of renal cell carcinoma (RCC) cell lines derived from the primary tumors of patients who underwent surgery.

**Source**
All cell lines were established in Dr. Lloyd Old’s laboratory, from patients undergoing nephrectomy at Memorial Hospital, MSK, between the years 1972 and 1987. Fresh surgical specimens were obtained from Tumor Procurement Services, Department of Surgical Pathology, Memorial Hospital, MSK.

**Lead Inventor**
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research, and members of the Old Laboratory

**Key References**
- Ueda R et al. (1979) Cell surface antigens of human renal cancer defined by autologous typing. *Journal of Experimental Medicine* 150: 564-579. PMID: [479762](https://doi.org/10.1084/jem.150.3.564)
- Ebert T et al. (1990) Establishment and characterization of human renal cancer and normal kidney cell lines. *Cancer Research* 50: 5531-5536. PMID: [2386958](https://doi.org/10.1158/0008-5472.CAN-90-0866)

**Comments**
Cell lines may be licensed -individually or in any preferred combination.

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see [here](https://www.mskcc.org/core-express-license) for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see [here](https://www.mskcc.org/core-express-license). Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK’s Tangible Research Materials team at [TRMOTDRTM@mskcc.org](mailto:TRMOTDRTM@mskcc.org).

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at [skiabcf@mskcc.org](mailto:skiabcf@mskcc.org).

### Cell Lines

<table>
<thead>
<tr>
<th>Cell Line</th>
<th>Growth in Nude Mice</th>
<th>Growth in Soft Agar</th>
</tr>
</thead>
<tbody>
<tr>
<td>SK-RC-1 (aka 01)</td>
<td>√</td>
<td>x</td>
</tr>
<tr>
<td>SK-RC-2 (aka 02)</td>
<td>√</td>
<td>x</td>
</tr>
<tr>
<td>SK-RC-4 (aka 04)</td>
<td>x</td>
<td>n.d.</td>
</tr>
<tr>
<td>SK-RC-6 (aka 06)</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>SK-RC-7 (aka 07)</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>SK-RC-8 (aka 08)</td>
<td>x</td>
<td>n.d.</td>
</tr>
<tr>
<td>SK-RC-10*</td>
<td>n.d.</td>
<td>n.d.</td>
</tr>
<tr>
<td>SK-RC-11</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>SK-RC-12</td>
<td>x</td>
<td>n.d.</td>
</tr>
<tr>
<td>SK-RC-14</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>SK-RC-15</td>
<td>√</td>
<td>n.d.</td>
</tr>
<tr>
<td>SK-RC-16</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>SK-RC-19</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>SK-RC-20</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>SK-RC-22</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>SK-RC-24</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>SK-RC-25</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>SK-RC-26*</td>
<td>n.d.</td>
<td>n.d.</td>
</tr>
<tr>
<td>SK-RC-28</td>
<td>x</td>
<td>√</td>
</tr>
<tr>
<td>SK-RC-30</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>SK-RC-34</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>SK-RC-37</td>
<td>√</td>
<td>n.d.</td>
</tr>
<tr>
<td>SK-RC-48</td>
<td>√</td>
<td>n.d.</td>
</tr>
<tr>
<td>SK-RC-56</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>SK-RC-61</td>
<td>√</td>
<td>√</td>
</tr>
</tbody>
</table>

*A cell line established from a metastatic site in the same patient is available. Please contact us for more details.

Key: x = No; √ = Yes; n.d. = Not Determined

CELL LINES

Sarcoma
**Saos-2: Human Osteosarcoma Cell Line**  
*ATCC Catalogue No. HTB-85*

**Description**
Saos-2 is a human osteosarcoma cell line, which displays several osteoblastic features. These cells express receptors for 1,25-dihydroxyvitamin D3 and have high basal alkaline-phosphatase activity. They express the parathyroid hormone (PTH) receptor and produce cyclic AMP in response to treatment with PTH. These cells do not form tumors when injected subcutaneously into immunocompromised mice. When injected into diffusion chambers that are implanted intra-peritoneally into immunocompromised mice, however, Saos-2 cells produce a mineralized matrix, which is a defining characteristic of osteoblastic cells. All of these characteristics make this cell line an attractive source of bone-related molecules for research.

**Source**
This cell line was established in 1973 from an 11-year-old Caucasian female with osteogenic sarcoma.

**Lead Inventor**
- Jorgen Fogh, PhD, formerly at Sloan Kettering Institute, MSK

**Key References**

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: 1) Fill out MSK's ATCC Express License; see [here](https://www.mskcc.org/patient-care/services-and-programs/tangible-materials) for links to the online fillable ATCC Express License, as well as a PDF version. 2) After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see [here](https://www.mskcc.org/patient-care/services-and-programs/tangible-materials). Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK's Tangible Materials team at TRMOTDRTM@mskcc.org.

**MSK Tracking Code:** SK 771
CELL LINES

Sarcoma, Ewing

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK's tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
SK-ES-1: Human Ewing Sarcoma Cell Line (aka SK-ES-01)

Description
SK-ES-1 is a human Ewing sarcoma (anaplastic osteosarcoma) cell line that displays epithelial morphology and grows in adherent tissue culture. These cells are a useful preclinical model to study Ewing sarcoma and have been used in the assessment of experimental therapeutic agents.

SK-ES-1 cells form xenograft small-cell malignant tumors consistent with Ewing sarcoma when injected into immunocompromised mice. These cells have been reported to express mutant p53 (C176F) protein.

Source
This cell line was established in 1971 from a bone biopsy in an 18-year-old Caucasian male with Ewing’s sarcoma.

Lead Inventor
- Eda T. Bloom, PhD, formerly at Sloan Kettering Institute, MSK

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.
Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTDRTM@mskcc.org.

For non-licensing requests from academic-research institutions: Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

MSK Tracking Code: SK1980-542

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
CELL LINES

Teratomas

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
**Tera-2: Human Carcinoma Cell Line Derived from a Lung Metastatic Site (ATTC Catalogue No. HTB-106)**

**Description**
This is a human malignant embryonal carcinoma cell line derived from a lung metastatic site. Karyotype characterization reveals (P13) hypotriploid (+A2, +A3, +B, +C, +E, +F, -A1) with abnormalities including acrocentric fragmentation and secondary constrictions. It is blood type A; Rh+.

**Source**
This cell line was established from a metastatic site (lung) in a 22-year-old Caucasian male.

**Lead Inventor**
- Jorgen Fogh, PhD, former at Sloan Kettering Institute, MSK

**Key References**

**Licensing Information**
**Express License:** For internal research purposes by a for-profit entity: 1) Fill out MSK’s ATCC Express License; see [here](#) for links to the online fillable ATCC Express License, as well as a PDF version. 2) After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see [here](#). Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

**Commercial License:** Contact MSK’s Tangible Materials team at TRMOTDRTM@mskcc.org.
CELL LINES

Uterine Cancer
SK-UT-1: Human Uterine Leiomyosarcoma Cell Line (aka SK-UT-01)

Description
SK-UT-1 is a human uterine leiomyosarcoma cell line that grows in adherent culture. This cell line has little or no phosphorylated retinoblastoma protein compared to the SK-UT-1B cells. SK-UT-1 cells are capable of forming tumors when inoculated in immunocompromised mice.

Source
This cell line was established in 1972 from a 75-year-old Caucasian female with a uterine mixed mesodermal tumor consistent with leiomyosarcoma grade III.

Inventors
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director, New York Branch, Ludwig Institute for Cancer Research
- Germaine Trempe, formerly at Sloan Kettering Institute, MSK

Key References
- Fogh J et al. (1977) One hundred and twenty-seven cultured human tumor cell lines producing tumors in nude mice. Journal of the National Cancer Institute 59: 221-226. PMID: 327080
- Ganiatssas S et al. (2001) A splice variant of Skp2 is retained in the cytoplasm and fails to direct cyclin D1 ubiquitination in the uterine cancer cell line SK-UT. Oncogene 20: 3641-50. PMID: 11439327

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK's Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

For non-licensing requests from academic-research institutions: Contact MSK's Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

MSK Tracking Code: SK1980-537

SK-UT-1B: Human Uterine Leiomyosarcoma Cell Line (ATCC Catalogue No. HTB-115)

Description
SK-UT-1B is a subline of the SK-UT-1 human uterine leiomyosarcoma cell line and grows in adherent culture. Although the SK-UT-1B cell line forms tumors when inoculated in immunocompromised mice, the resulting tumors are different from tumors produced by the parental SK-UT-1 cell line. This cell line displays relatively low chromosome instability, compared to other established cancer cell lines. SK-UT-1B maintains a near-diploid karyotype and is characterized by a very low percentage of polyploid cells. The SK-UT-1B cells have high levels of phosphorylated retinoblastoma protein, compared to the parental SK-UT-1 cells.

Source
This is a subline of the SK-UT-1 cell line. The parental cell line was established in 1972 from a 75-year-old Caucasian female with a uterine mixed mesodermal tumor consistent with leiomyosarcoma grade III.

Inventors
- Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK, New York Branch, Ludwig Institute for Cancer Research
- Germaine Trempe, formerly at Sloan Kettering Institute, MSK

Key References
- Fogh J et al. (1977) One hundred and twenty-seven cultured human tumor cell lines producing tumors in nude mice. Journal of the National Cancer Institute 59: 221-226. PMID: 327080

Licensing Information
Express License: For internal research purposes by a for-profit entity: 1) Fill out MSK's ATCC Express License; see here for links to the online fillable ATCC Express License, as well as a PDF version. 2) After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

For non-licensing requests from academic-research institutions: Contact MSK's Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

MSK Tracking Code: SK2010-071
SK-UT-02: Human Endometrial Carcinoma Cell Line

Description
SK-UT-02 is a human uterine cell line.

Source
This cell line was established from a uterine metastasis in a female with endometrial carcinoma.

Lead Researcher/Research Laboratory
Lloyd J. Old, MD, former William E. Snee Chair in Cancer Immunology, MSK; former Director of the Ludwig Institute for Cancer Research

Key References

Licensing Information
Express License: For internal research purposes by a for-profit entity: Fill out MSK’s Core Express License; see here for links to the online fillable Core Express License, as well as a PDF version. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Research Materials team at TRMOTD@mskcc.org.

For non-licensing requests from academic-research institutions:
Contact MSK’s Antibody & Bioresource Core Facility at skiabcf@mskcc.org.

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTD@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
CELL LINES

Vulva
SK-LMS-01: Human Vulva Cancer – Vulvar Leiomyosarcoma Cell Line (ATCC Catalogue No. HTB-88)

Description
SK-LMS-01 is a human vulca cancer cell line.

Source
This cell line was established from a vulva metastasis in a 43-year-old person with Vulvar Leiomyosarcoma.

Lead Researcher/Research Laboratory
Germaine Trempe, formerly of MSK

Key References
• Fogh J., Trempe G.L. New human tumor cell lines. (In) Human tumor cells in vitro; Fogh J. (eds.); pp.115-159; Springer; New York (1975)

Licensing Information

Express License: For internal research purposes by a for-profit entity: 1) Fill out MSK’s ATCC Express License; see here for links to the online fillable ATCC Express License, as well as a PDF version. 2) After execution by MSK, you will receive a signed copy, and can then place your order with ATCC. For detailed guidance on how to fill out this webform, see here. Please note: In order to streamline and expedite the licensing of select MSK cell lines, the terms of this non-exclusive license are non-negotiable. This license is only available for select cell lines, including this one. Once this license has been executed by MSK, you will receive a signed copy and payment instructions; all payments up to $10,000 must be made by credit card.

Commercial License: Contact MSK’s Tangible Materials team at TRMOTDRTM@mskcc.org.

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
MOUSE MODELS
SK1040: The Ef-Luc Mouse

Description
The Ef-Luc mouse is a transgenic mouse model expressing luciferase driven by an E2F1 responsive promoter used for the sensitive, non-invasive, in vivo detection of tumor growth. It is patent protected by U.S. Patent 7,041,869.

E2F1 is a transcription factor whose activity is repressed by the retinoblastoma protein (Rb), a master regulator of cell-cycle progression through the G1 to S transition. A common feature in many distinct types of human malignancies is the loss of Rb function, resulting in upregulation of E2F1 transcriptional activity and dysregulation of cell-cycle control.

Therefore, the Ef-Luc mouse can be considered a general reporter animal useful for the detection and imaging of multiple different tumor types.

Tumor formation as well as efficacy of anticancer treatment can be monitored over time using a single Ef-Luc Mouse.

The Ef-Luc mouse is an ideal tool for monitoring cell-cycle activity during tumor development in a living animal using bioluminescence imaging.

Areas of abnormally high cell proliferation in the Ef-Luc mouse, namely cancerous cells, drive expression of luciferase.

The resulting luciferase can be detected by injection of the Ef-Luc mouse with the luciferase substrate luciferin; luciferase oxidization of luciferin produces light that is then detected through the body of the mouse and is proportional to tumor cell burden.

Intellectual Property
The Ef-Luc Mouse is patent protected: U.S. Patent 7,041,869.

Advantages
• High sensitivity allows detection of small subcutaneous tumors (<1,000 cancer cells) and deeper lesions (1-3 cm deep), which can be undetectable by standard measurement methods.
• Universal tumor detection increases the applicability of the Ef-Luc mouse model to multiple tumor types.
• Quantitative measurement of tumor burden reveals subtle changes in tumor growth.
• Rapid real-time imaging allows spatial and temporal resolution of tumor growth.
• This noninvasive method with minimal toxicity allows repeated imaging of a single animal. Fewer mice are needed per study, which reduces the cost of animal studies.

Key References

Lead Inventor
• Eric C. Holland, MD, PhD, formerly of MSK

Licensing Information: Corporations and other for-profit entities may nonexclusively license MSK’s tangible materials for research or certain commercial purposes. MSK Office of Technology Development Contact for more information: TRMOTDRTM@mskcc.org. Note that availability, pricing, and license contracts are subject to change.
SK2011-042. Conditional ASXL1 Knock-out Mouse Model

Description
Mutations in Additional Sex Combs-Like 1 (ASXL1) were described in bcr-abl1 negative myeloproliferative neoplasms (MPN). These mutations are common in myelomonocytic leukemias, secondary acute myeloid leukemias, including blast-phase MPN, and in myelodysplastic syndromes, and they are associated with worsened overall survival.

As a research tool, this mouse model offers promising potential to investigators seeking insights into epigenetic modifiers of signal transduction in myeloproliferative disorders. It may therefore help facilitate the development of biomarkers, new drugs, and/or novel treatment regimens.

Source
This knock-out mouse was made at InGenious, and was developed by MSK investigators in collaboration with investigators at NYU.

Lead Inventor
• Ross Levine, MD, Director, MSK Center for Hematologic Malignancies, and Laboratory Head, Human Oncology & Pathogenesis Program, MSK

SK2011-043. Conditional BAP1 Knock-out Mouse Model

Description
The BAP1 nuclear deubiquitinase is known to target histones (together with ASXL1 as a Polycomb repressor subunit) and the HCF1 transcriptional co-factor. Mutations in BAP1 thus far have been most strongly associated with an increased risk of developing mesothelioma and uveal melanoma.

As a research tool, this mouse model offers promising potential to investigators seeking insights into epigenetic modifiers of signal transduction in myeloproliferative disorders. It may therefore help facilitate the development of biomarkers, new drugs, and/or novel treatment regimens.

Source
This mouse was generated entirely by MSK investigators using EUCOM ES cells.

Lead Inventor
• Ross Levine, MD, Director, MSK Center for Hematologic Malignancies, and Laboratory Head, Human Oncology & Pathogenesis Program, MSK
SK2011-047. MAD2 Overexpressing Mice

Description
MSK’s MAD2 overexpressing mice are available for license as a research tool. The mitotic checkpoint protein hsMad2 is required to arrest cells in mitosis when chromosomes are unattached to the mitotic spindle. The presence of a single, lagging chromosome is sufficient to activate the checkpoint, producing a delay at the metaphase-anaphase transition until the last spindle attachment is made. Complete loss of the mitotic checkpoint results in embryonic lethality owing to chromosome mis-segregation in various organisms.

Investigators have also found that Mad2+/- mice develop lung tumors at high rates after long latencies, implicating defects in the mitotic checkpoint in tumorigenesis.

Lead Inventor
• Robert Benezra, PhD, Laboratory Head, Cancer Biology & Genetics Program, Sloan Kettering Institute, MSK

References
PDX MODELS
MSK-LX29 (Adenocarcinoma)

Sex: Female
Histology: Adenocarcinoma
Key Mutations: EGFR L858R, TP53 R248Q, MET Amplified, ERBB2 Amplified
Molecular Characteristics: MSK-IMPACT
Matched Normal: Yes Treatment: erlotinib Site: Lung
Paired: No
Comments: erlotinib resistant

MSK-LX40-R (Small Cell Lung Cancer)

Sex: Male
Histology: Small cell lung cancer
Key Mutations: TP53 H179R, RB1 S567*, NOTCH1 P2Rfs*31, MYCL Amplified
Molecular Characteristics: MSK-IMPACT, whole exome sequencing
Matched Normal: Yes
Treatment: LDE225 + cisplatin + etoposide, extensive cisplatin and etoposide treatment in PDX
Site: Lung
Paired: Yes
Comments: Chemoresistant

MSK-LX40 (Small Cell Lung Cancer)

Sex: Male
Histology: Small cell lung cancer
Key Mutations: TP53 H179R, RB1 S567*, NOTCH1 P2Rfs*31, MYCL Amplified
Molecular Characteristics: MSK-IMPACT, whole exome sequencing
Matched Normal: Yes
Treatment: LDE225 + cisplatin + etoposide
Site: Lung
Paired: Yes
Comments: Chemosensitive relapse

MSK-LX55 (Adenocarcinoma)

Sex: Male
Histology: Adenocarcinoma
Key Mutations: EML4-ALK Fusion
Molecular Characteristics: Yes
Matched Normal: Yes
Treatment: crizotinib
Site: Lung
Paired: No
Comments: crizotinib resistant

Licensing Information: Corporations and other for-profit entities may nonexclusively license Memorial Sloan Kettering’s tangible materials for research or commercial purposes.
**MSK-LX95 (Small Cell Lung Cancer)**

**Sex:** Male  
**Histology:** Small cell lung cancer  
**Key Mutations:** TP53 G154Afs*16, RB1 X203_splice, PTEN L181Wfs*13, MYCN Amplified  
**Molecular Characteristics:** MSK-IMPACT, whole exome sequencing  
**Matched Normal:** Yes  
**Treatment:** cisplatin + etoposide  
**Site:** Lung  
**Paired:** Yes  
**Comments:** Chemosensitive relapse

**MSK-LX285 (Adenocarcinoma)**

**Sex:** Male  
**Histology:** Adenocarcinoma  
**Key Mutations:** EGFR L858R, EGFR T790M, EGFR Amplified  
**Molecular Characteristics:** MSK-IMPACT  
**Matched Normal:** Yes  
**Treatment:** erlotinib  
**Site:** Lung  
**Paired:** No  
**Comments:** erlotinib resistant

**MSK-LX95-R (Small Cell Lung Cancer)**

**Sex:** Male  
**Histology:** Small cell lung cancer  
**Key Mutations:** TP53 G154Afs*16, RB1 X203_splice, PTEN L181Wfs*13, MYCN Amplified  
**Molecular Characteristics:** MSK-IMPACT, whole exome sequencing  
**Matched Normal:** Yes  
**Treatment:** cisplatin + etoposide, extensive cisplatin and etoposide treatment in PDX  
**Site:** Lung  
**Paired:** Yes  
**Comments:** Chemoresistant

---

**Licensing Information:** Corporations and other for-profit entities may nonexclusively license Memorial Sloan Kettering’s tangible materials for research or commercial purposes.