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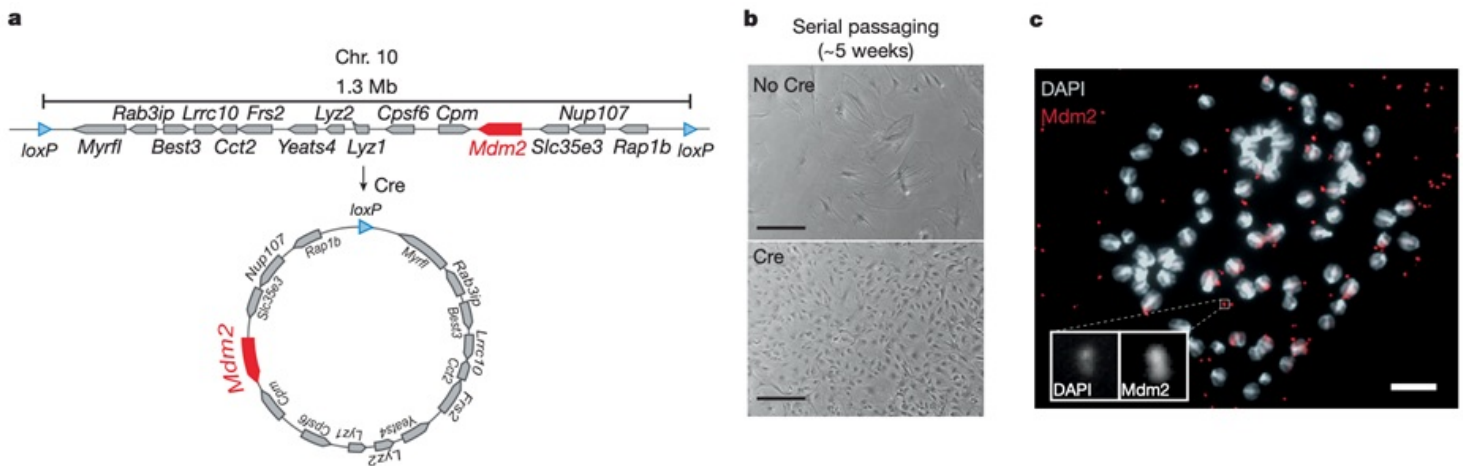
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Modeling Extrachromosomal Oncogene Amplifications

Amplifications

Extremely small, circular DNA molecules, known as extrachromosomal DNA (ecDNA), are small, circular DNA molecules that can encode oncogenes, driving high copy-number amplification. ecDNAs are estimated to be present in approximately 17% of all tumors with higher prevalence in certain tumor types including glioblastoma & sarcomas. We have generated several mouse models where we can spatiotemporally induce ecDNA formation of Myc, Mdm2, and other oncogenes commonly found as ecDNA. We are presently focused on characterizing these models and believe they will aid in preclinical efforts towards targeting these aberrant structures. Currently, we are exploring several tumor types which harbor ecDNA, including liposarcoma, glioblastoma, small cell lung cancer, and pancreatic cancer.



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