

R26-CAG-LSL-RSR-tdTomato-2A-DTR

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| Nomenclature | C57BL/6Smoc- <i>Gt(ROSA)26Sor</i> ^{em1(CAG-LSL-RSR-tdTomato-2A-DTR)Smoc} |
| Cat. NO. | NM-KI-190086 |
| Strain State | Repository Live |

Gene Summary

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|-------------------------------------|-------------------|--|
| Gene Symbol Gt(ROSA)26Sor | Synonyms | R26, ROSA26, AV258896, Gtrg eo26, Gtrosa26, Thumpd3as1 |
| | NCBI ID | 14910 |
| | MGI ID | 104735 |
| | Ensembl ID | ENSMUSG00000086429 |

Model Description

These mice harbor a CAG-LSL-RSR-tdTomato-2A-DTR cassette in the Rosa26 locus generated by homologous recombination.

Research Application: Dre and Dre reporter

*Literature published using this strain should indicate: R26-CAG-LSL-RSR-tdTomato-2A-DTR mice (Cat. NO. NM-KI-190086) were purchased from Shanghai Model Organisms Center, Inc..

Validation Data

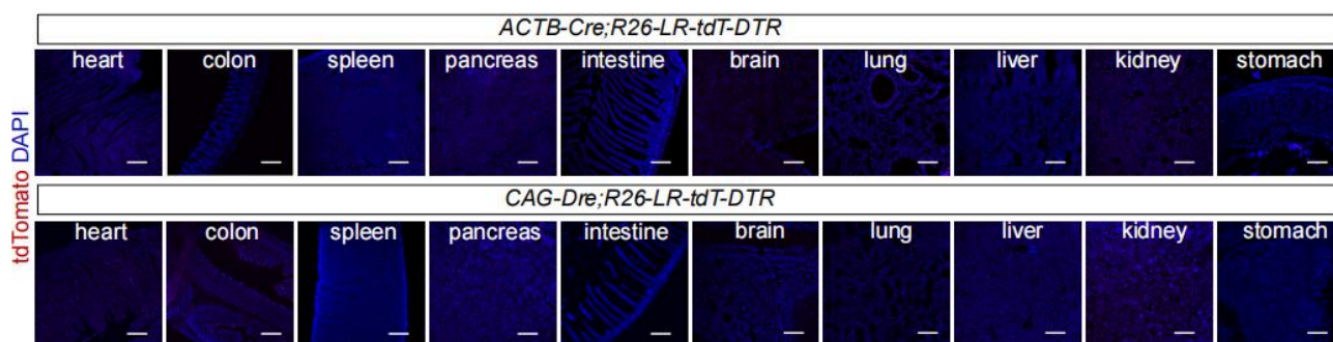


Fig1. Immunostaining for tdTomato on sections of multiple tissues or organs collected from ACTB-Cre;R26-LR-tdT-DTR mice (upper panel) or CAG-Dre;R26-LR-tdT-DTR mice (lower panel).

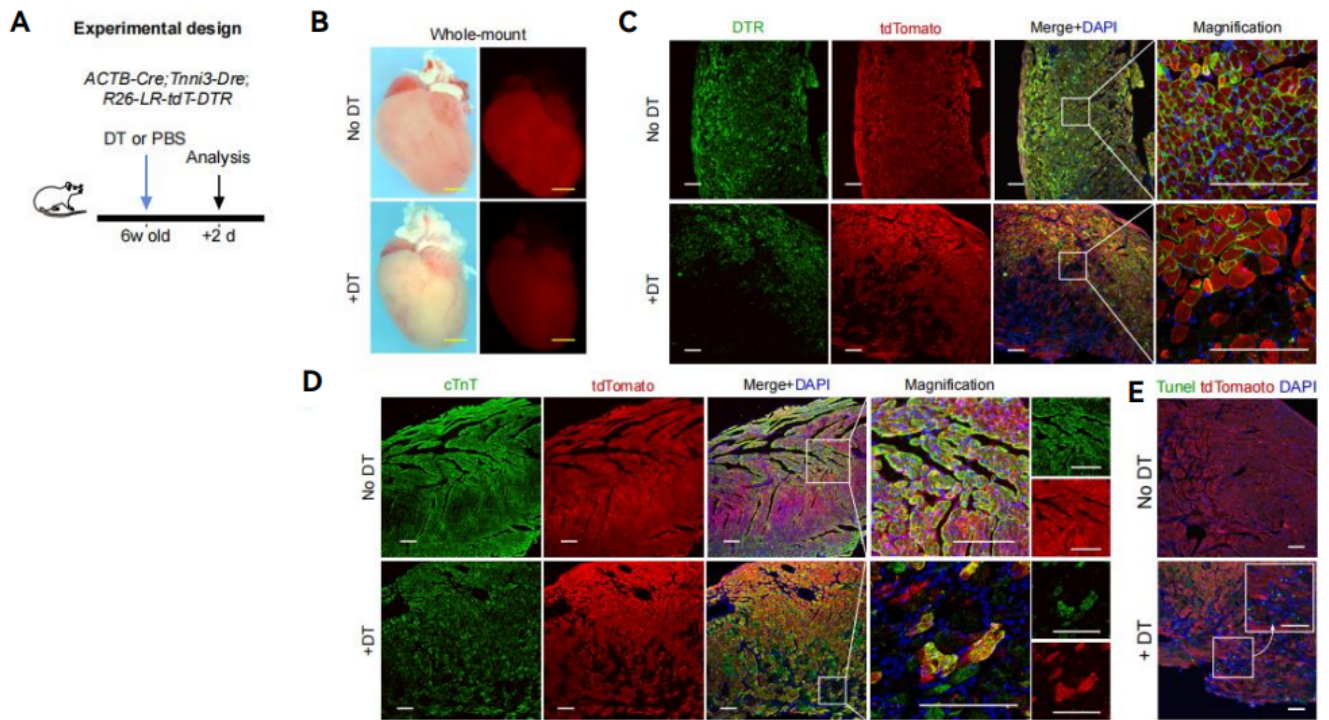


Fig2. DTR-mediated cardiomyocyte ablation after DT administration.

A, a schematic figure showing experimental design. B, whole-mount view of triple transgenic mice treated with PBS or DT. Yellow scale bar represents 2000 μm . C, immunostaining for DTR and tdTomato on heart sections of triple transgenic mice. White scale bar represents 100 μm . D, immunostaining for cTnT and tdTomato on heart sections of triple transgenic mice. White scale bar represents 100 μm . E, immunostaining for TUNEL and tdTomato on heart sections. White scale bar represents 100 μm .

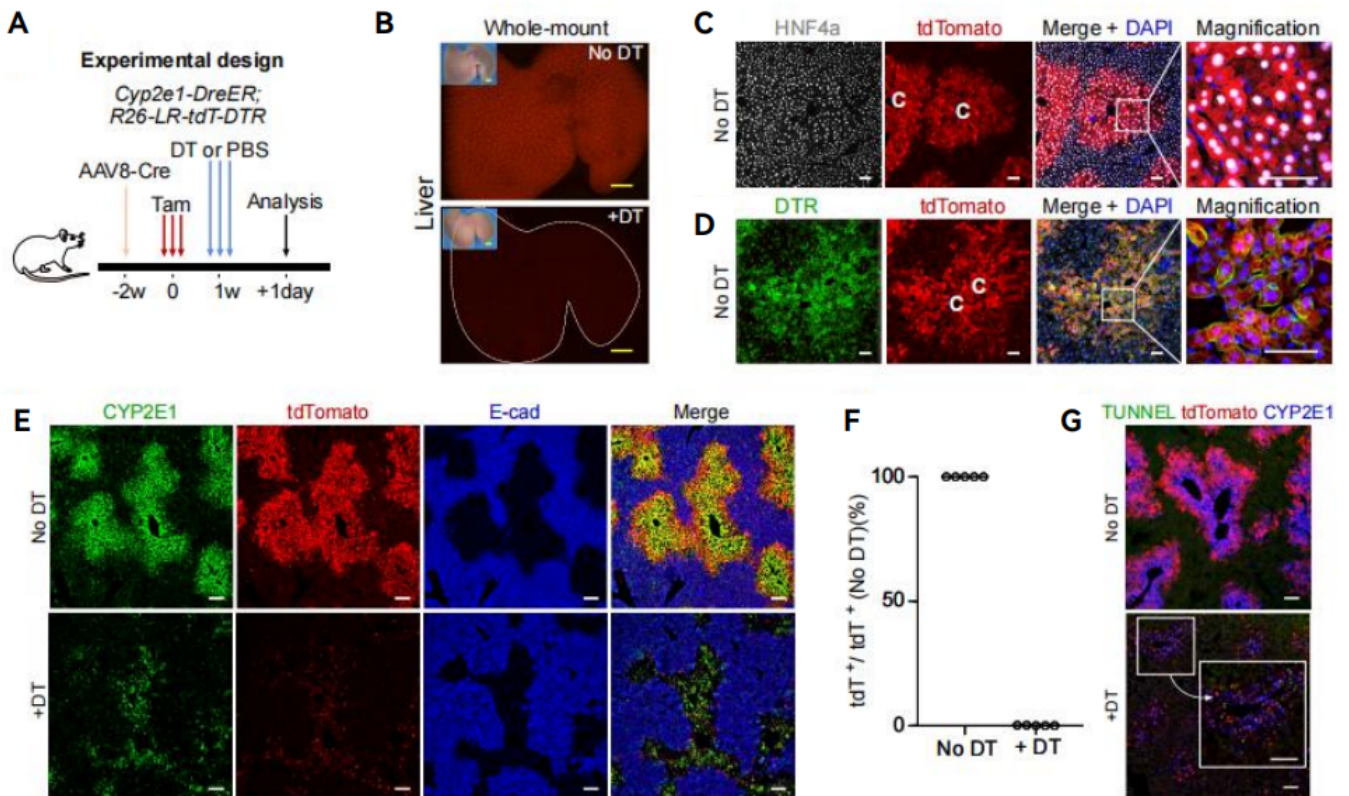


Fig3. DTR-mediated specific ablation of Cyp2e1^+ peri-central hepatocytes.

A, a cartoon figure showing the mouse's mating strategy. B, whole-mount epifluorescence view of livers collected from mice treated with DT or PBS. Yellow scale bar represents 2000 μm . C and D, immunostaining for tdTomato, HNF4a (E), or DTR (F) on liver sections treated with PBS. White scale bar represents 100 μm . C, central vein. E, immunostaining for CYP2E1, tdTomato, and E-cad on liver sections from mice treated with PBS or DT. White scale bar represents 100 μm . F, quantification of the percentage of tdTomato+ hepatocytes (DT group) in comparison of tdTomato+ hepatocytes (PBS group). G, immunostaining for TUNNEL and tdTomato on liver sections from mice treated with PBS or DT. White scale bar represents 100 μm .

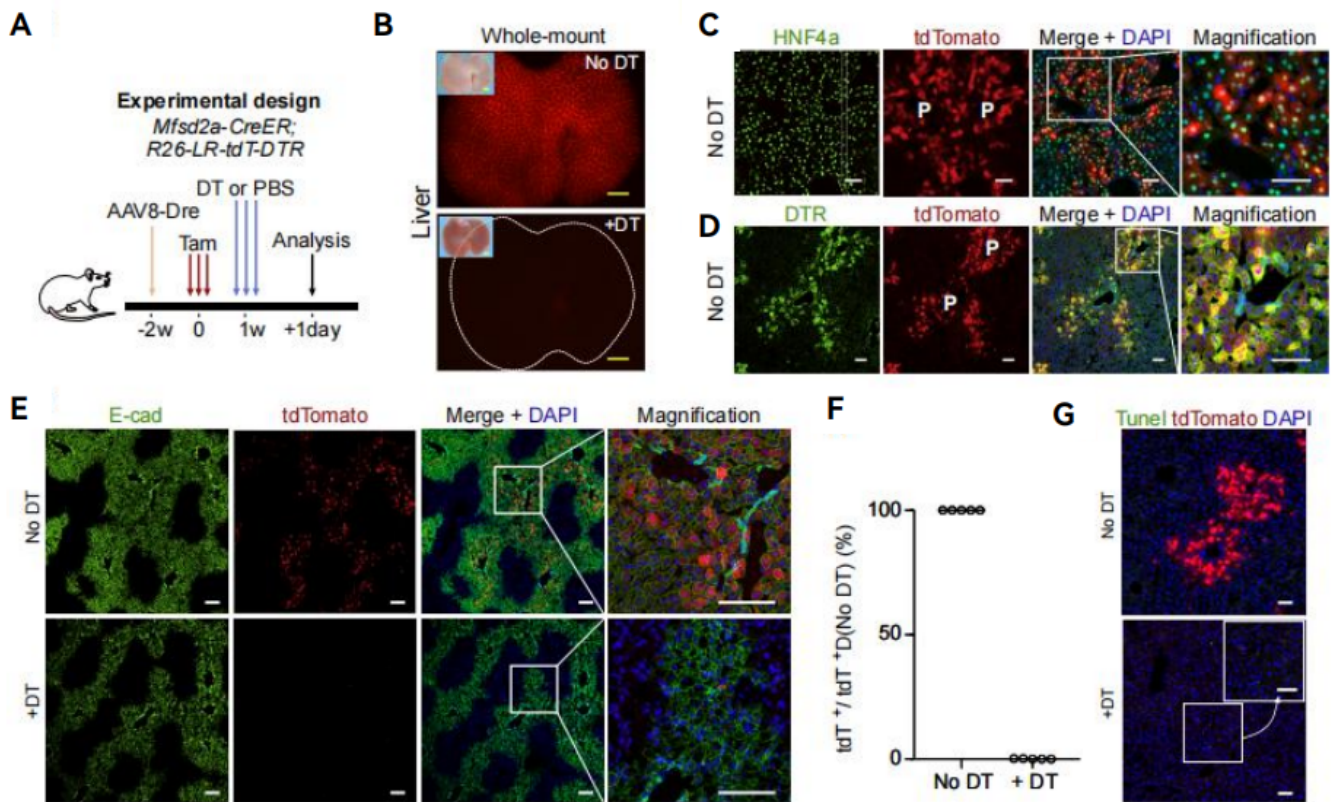


Fig4. DTR-mediated specific ablation of $Mfsd2a^+$ peri-portal hepatocytes.

A, a schematic figure showing the genetic recombination of the R26-LR-tdT-DTR allele by $Mfsd2a$ -CreER and AAV8-TBG-Dre. B, whole-mount fluorescent view of livers collected from mice treated with PBS or DT. Yellow scale bar represents 2000 μm . C and D, immunostaining for tdTomato, HNF4a (E), or DTR (F) on liver sections of mice treated with PBS. White scale bar represents 100 μm . E, immunostaining for E-cad and tdTomato on liver sections from mice treated with PBS or DT. White scale bar represents 100 μm . F, quantification of the percentage of tdTomato+ hepatocytes (DT group) in comparison with tdTomato+ hepatocytes (PBS group). $n = 5$. G, immunostaining for TUNEL and tdTomato on liver sections of mice treated with PBS or DT. White scale bar represents 100 μm .

*The above data is derived from: Wang H, He L, Li Y, et al. Dual Cre and Dre recombinases mediate synchronized lineage tracing and cell subset ablation in vivo. *J Biol Chem*. 2022;298(6):101965. doi:10.1016/j.jbc.2022.101965

Publications

[Dual Cre and Dre recombinases mediate synchronized lineage tracing and cell subset ablation in vivo.](#)

References: The Journal of biological chemistry

[Bone marrow immune cells respond to fluctuating nutritional stress to constrain weight regain](#)

References: Cell Metabolism