

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

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

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

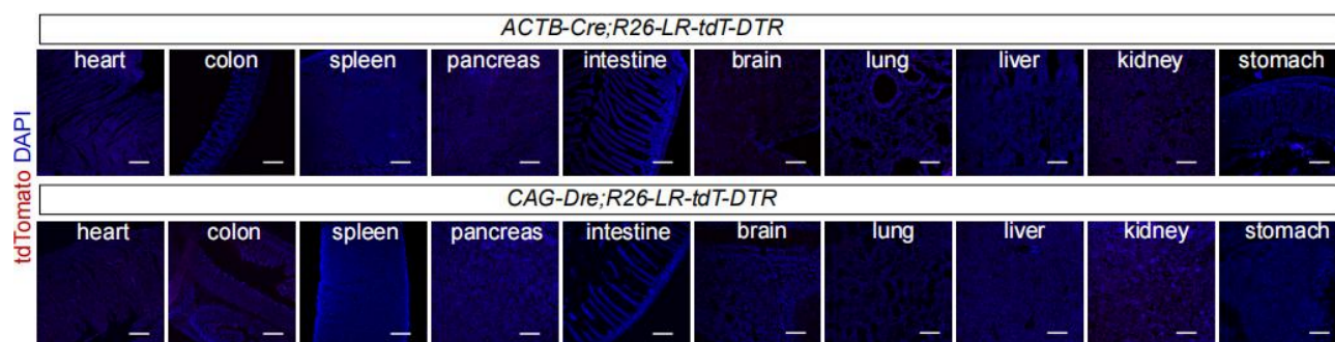


Fig1. Immunostaining for tdTomato on sections of multiple tissues or organs collected from *ACTB-Cre;R26-LR-tdT-DTR* mice (upper panel) or *CAG-Dre;R26-LR-tdT-DTR* mice (lower panel).

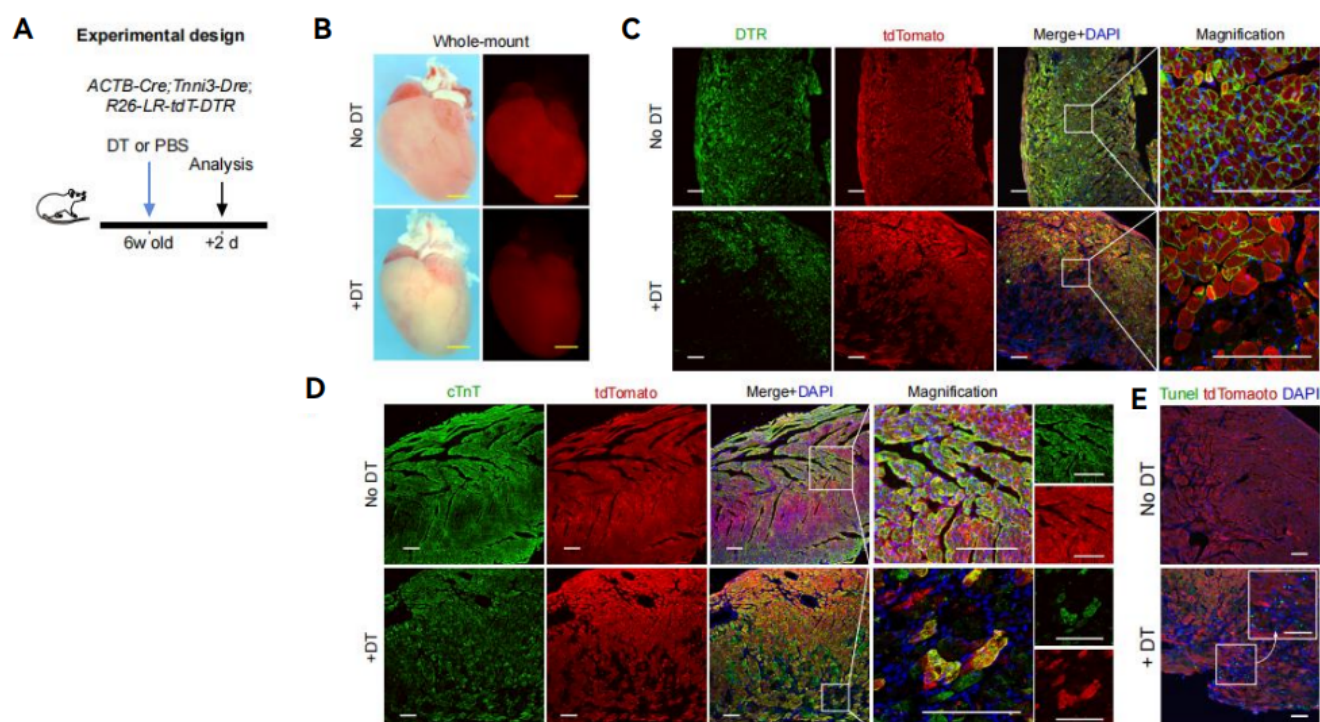


Fig2. DTR-mediated cardiomyocyte ablation after DT administration.

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 μ m. C, immunostaining for DTR and tdTomato on heart sections of triple transgenic mice. White scale bar represents 100 μ m. D, immunostaining for cTnT and tdTomato on heart sections of triple transgenic mice. White scale bar represents 100 μ m. E, immunostaining for TUNEL and tdTomato on heart sections. White scale bar represents 100 μ m.

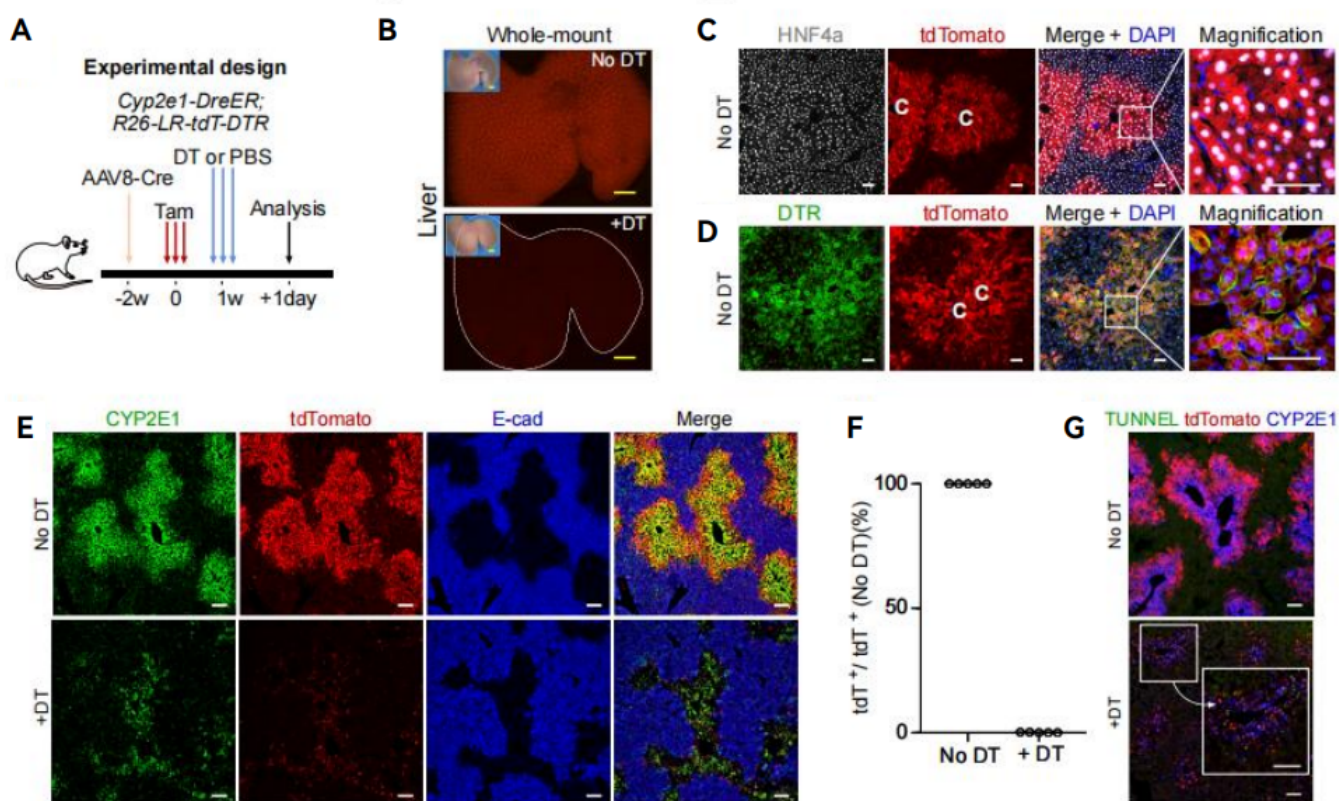


Fig3. DTR-mediated specific ablation of *Cyp2e1*⁺ peri-central hepatocytes.

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 μ m. C and D, immunostaining for tdTomato, HNF4a (E), or DTR (F) on liver sections treated with PBS. White scale bar represents 100 μ m. 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 μ m. F, quantification of the percentage of tdTomato⁺ hepatocytes (DT group) in comparison of tdTomato⁺ hepatocytes (PBS group). G, immunostaining for TUNEL and tdTomato on liver sections from mice treated with PBS or DT. White scale bar represents 100 μ m.

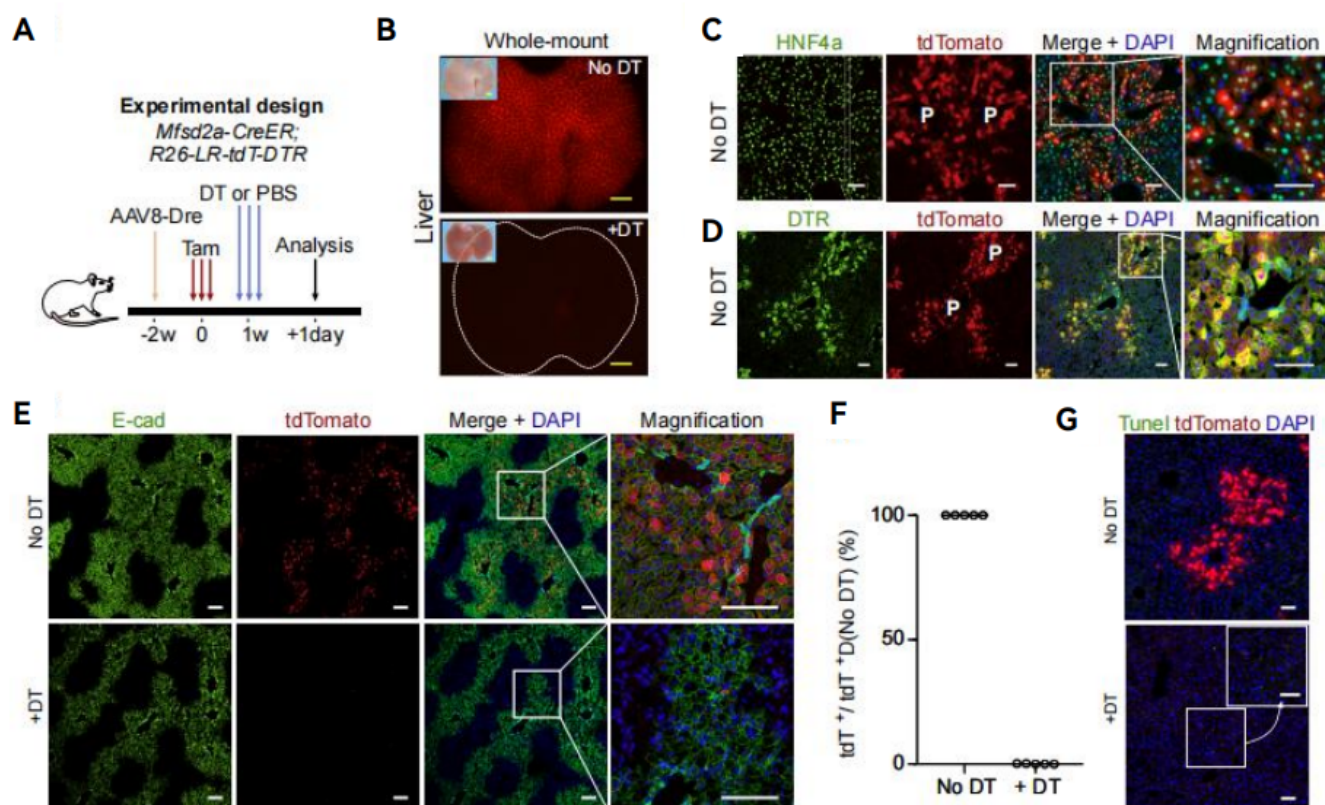


Fig4. DTR-mediated specific ablation of Mfsd2a⁺ peri-portal hepatocytes.

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 μ m. C and D, immunostaining for tdTomato, HNF4a (E), or DTR (F) on liver sections of mice treated with PBS. White scale bar represents 100 μ m. E, immunostaining for E-cad and tdTomato on liver sections from mice treated with PBS or DT. White scale bar represents 100 μ m. 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 μ m.

*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