

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	<u>14910</u>
	MGI ID	<u>104735</u>
	Ensembl ID	ENSMUSG0000086429

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 represents100 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 barrepresents 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 represents100 μ m. E, immunostainingfor 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 Tunnel 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

<u>Dual Cre and Dre recombinases mediate synchronized lineage tracing and cell subset ablation in</u> <u>vivo.</u>

References: The Journal of biological chemistry



Bone marrow immune cells respond to fluctuating nutritional stress to constrain weight regain References: Cell Metabolism