hTFR1

Nomenclature	C57BL/6Smoc-*Tfrc*$^{tm1(hTFRC)Smoc}$
Cat. NO.	NM-HU-215059
Strain State	Repository Live

Gene Summary

Gene Symbol Tfrc	**Synonyms**	TR; TFR; p90; CD71; TFR1; Trfr; Mtvr1; 2610028K12Rik; E430033M20Rik
	NCBI ID	22042
	MGI ID	98822
	Ensembl ID	ENSMUSG00000022797
	Human Ortholog	TFRC

Model Description

The endogenous mouse Tfrc gene was replaced by human TFRC gene.

*Literature published using this strain should indicate: hTFR1 mice (Cat. NO. NM-HU-215059) were purchased from Shanghai Model Organisms Center, Inc..

Validation Data

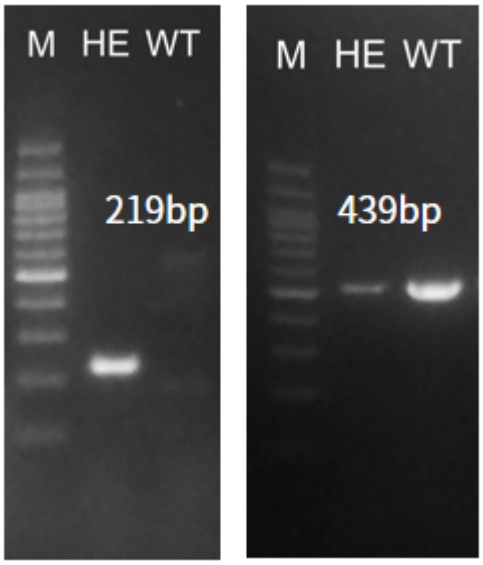

Fig1. Detection of mRNA expression in hTFR1/CD71 knockin mice by RT-PCR.

Wild type: only one band at 439 bp with primers F1/R1;

Heterozygous: one band at 439 bp with primers F1/R1 and one band at 219 bp with primers F2/R2;

Abbr.. M, DNA marker; HE, heterozygous; WT, wild type.

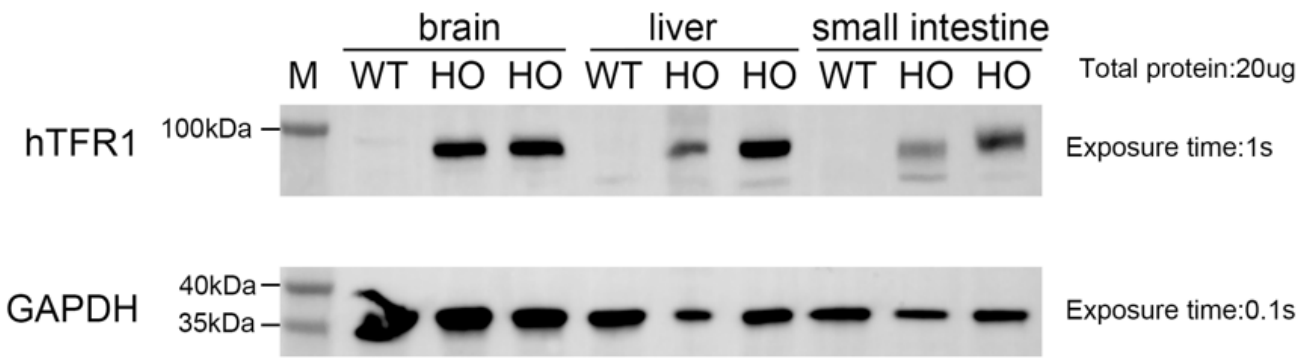

Fig2. Detection of human TFR1 expression in hTFR1 mice by WB.

Abbr. HO, homozygous; WT, wild type.

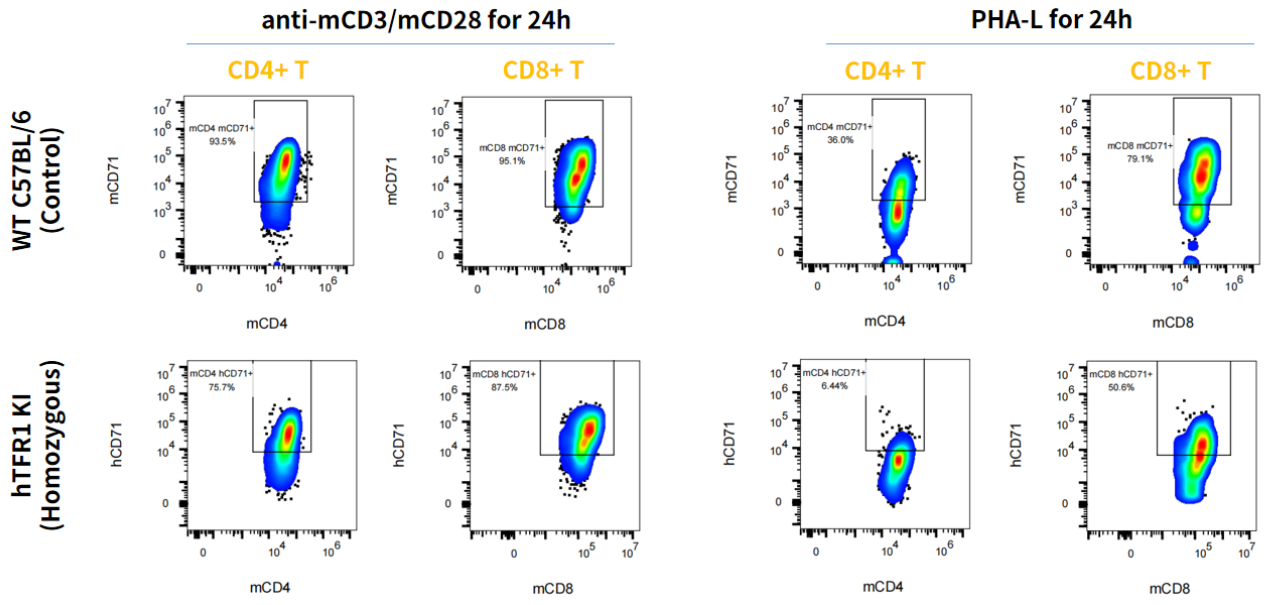

Fig3. Expression characterization of human TFR1 on activated T cells in spleen in hTFR1 knockin mice.

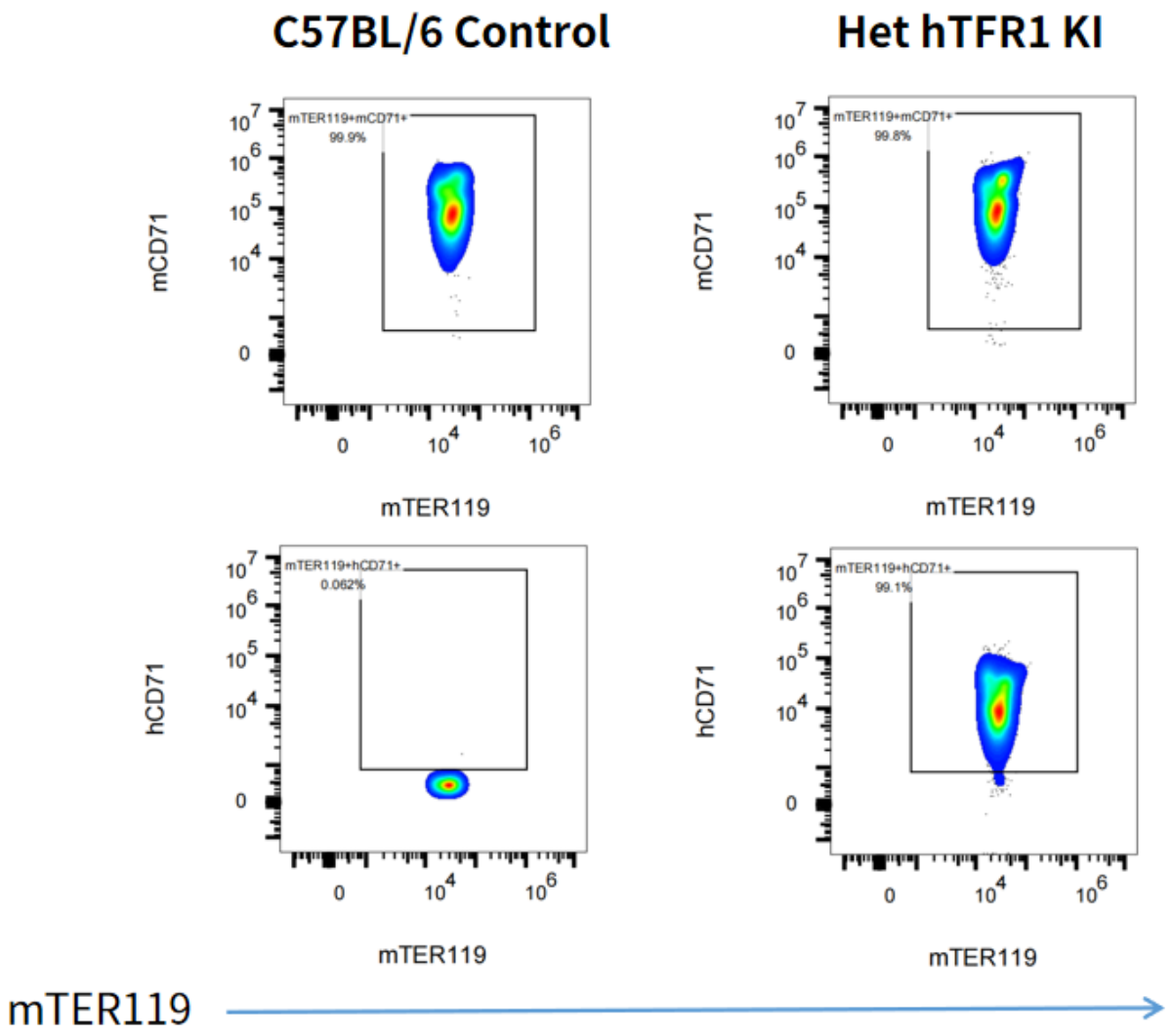

Fig4. Detection of human TFR1 expression on erythroid cells in hTFR1 knockin mice-derived bone marrow.

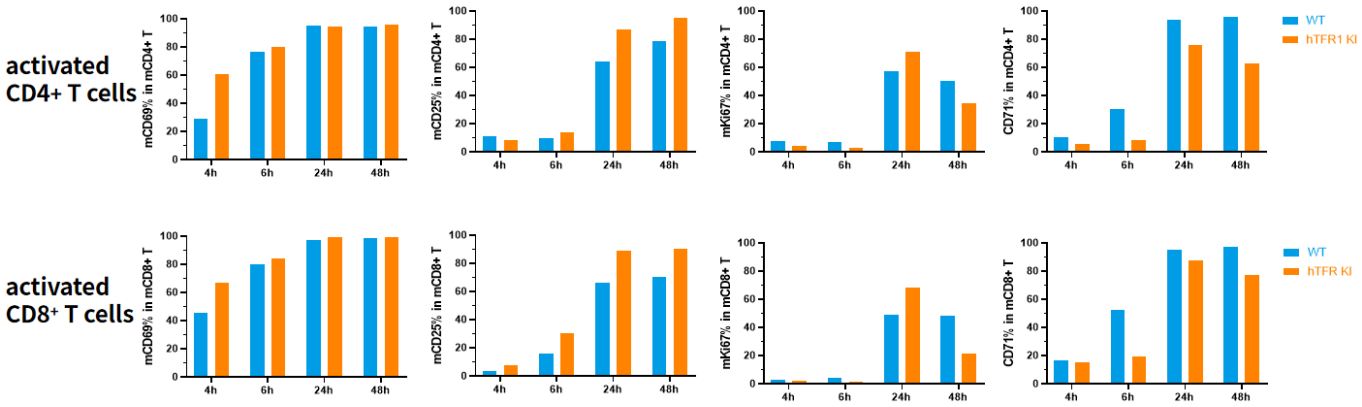

Fig5. Pattern of expression of activation markers overtime on activated CD4+ and CD8+ T cells upon anti-mCD3/mCD28 treatment.

Note: The splenocytes were stimulated with anti-mCD3/mCD28 antibody *in vitro*.

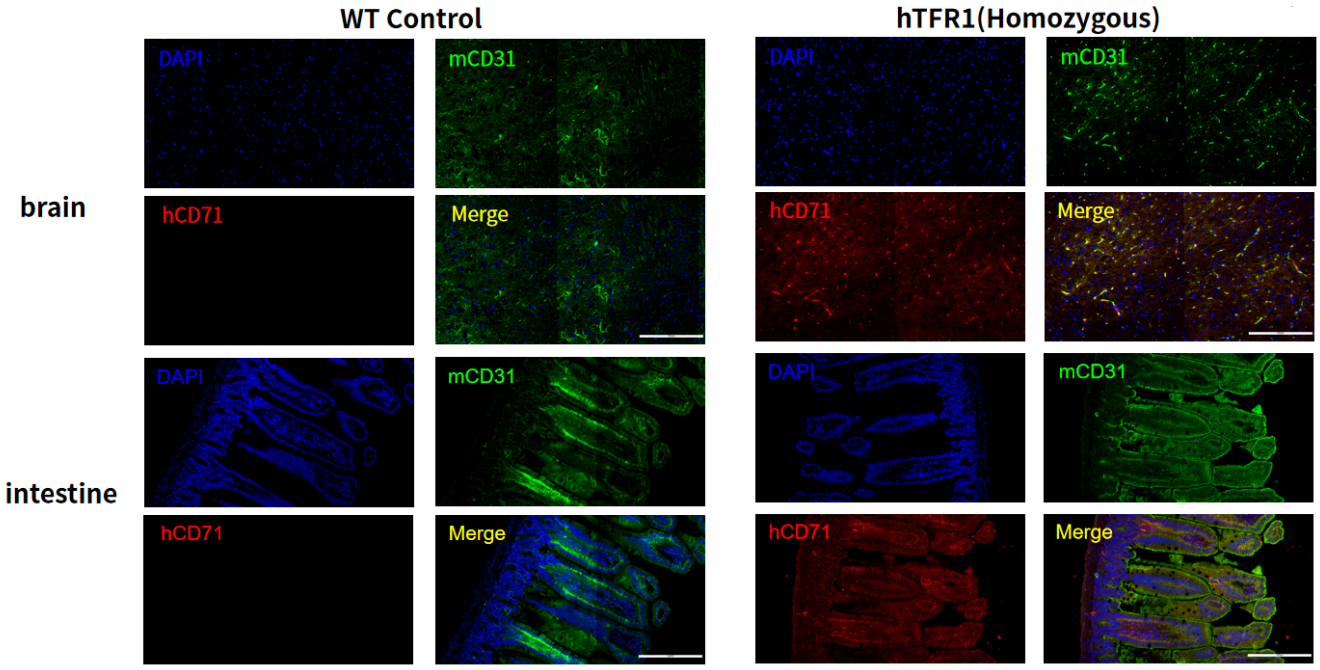

Fig6. Detection of hTFR1 expression on endothelial cells in hTFR1 knokcin mice by immunofluorescence staining.

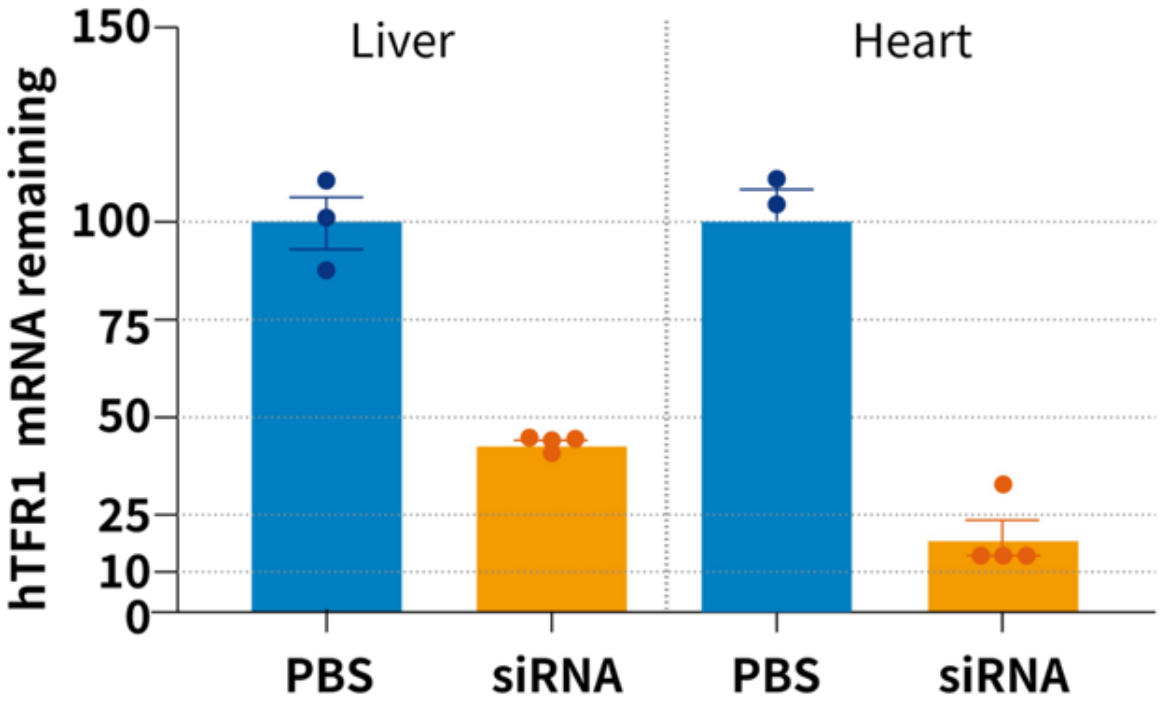

Fig7. *In vivo* evaluation of TFR1-targeting therapeutic agents in hTFR1 knockin mice.

In vivo knock-down efficiency of hTFR1-targted siRNA in liver and heart in hTFR1 knockin mice.

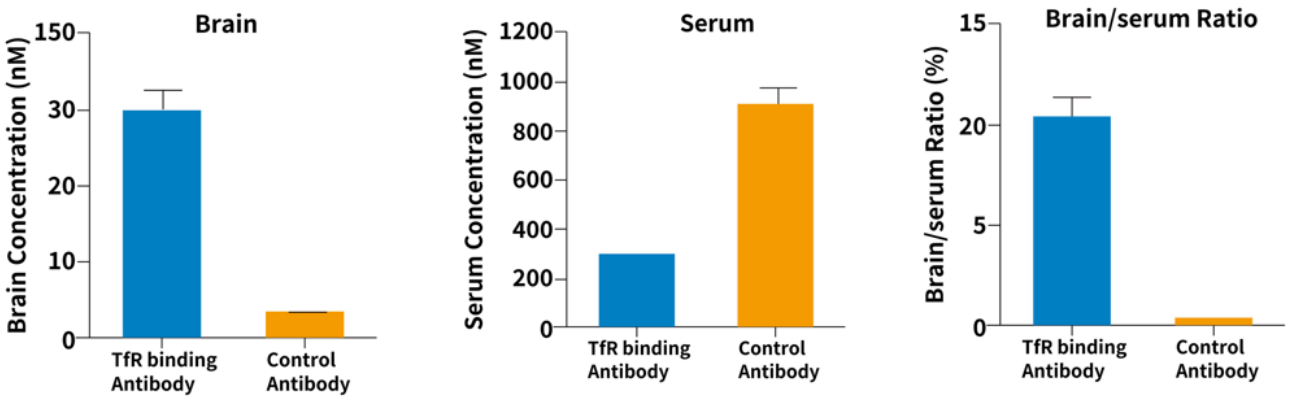

Fig8. *In vivo* evaluation of TFR1-targeting therapeutic agents in hTFR1 knockin mice.

hTFR1/CD71 knockin mice were injected with a control antibody (10mg/kg) and an antibody (10 mg/kg) against human TFR1 via *i.v.* injection.

Brain tissues and serums were taken after 18 hr post administration. Brain concentrations, serum concentrations and brain-to-serum ratio of antibodies were quantified. As shown in the figure, hTfr binding antibody exhibited higher serum clearance and enhanced brain exposure.