hC3

The endogenous mouse C3 gene was replaced by human C3 gene.

Nomenclature	C57BL/6Smoc-*C3*$^{em1(hC3)/Smoc}$
Cat. NO.	NM-HU-2000079
Strain State	Repository Live

Gene Summary

Gene Symbol **C3**	**Synonyms**	ASP; Plp; HSE-MSF; AI255234
	NCBI ID	12266
	MGI ID	88227
	Ensembl ID	ENSMUSG00000024164
	Human Ortholog	C3

Model Description

The endogenous mouse C3 gene was replaced by human C3 gene.
*Literature published using this strain should indicate: hC3 mice (Cat. NO. NM-HU-2000079) were purchased from Shanghai Model Organisms Center, Inc..

Validation Data

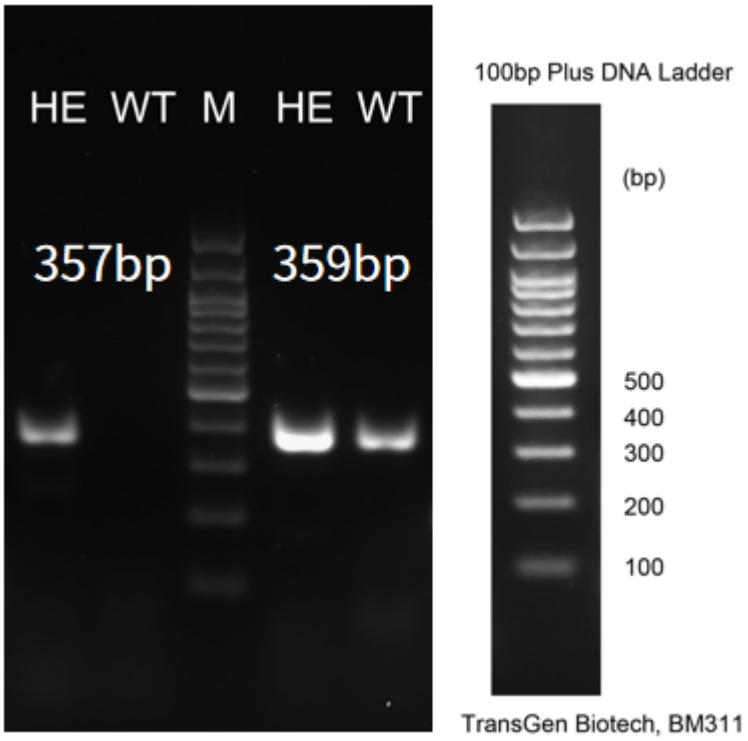


Fig1. Detection of C3 expression in liver by RT-PCR.

Wild type: only one band at 359 bp with primers F1/R1(mC3);

Heterozygous: one band at 359 bp with primers F1/R1(mC3) and one band at 357 bp with primers F2/R2(hC3);

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

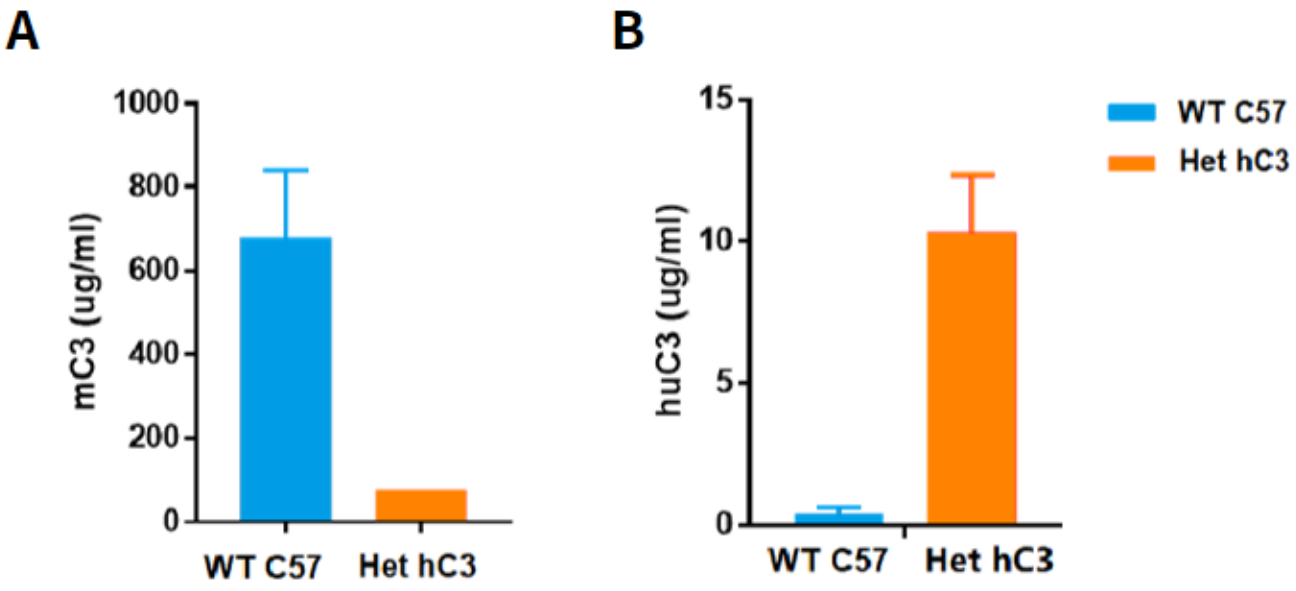


Fig 2. Detection of heterozygous hC3 expression in serum by ELISA.

Abbr. Het, heterozygous; WT, wild type.

Note: Data from the collaborator.

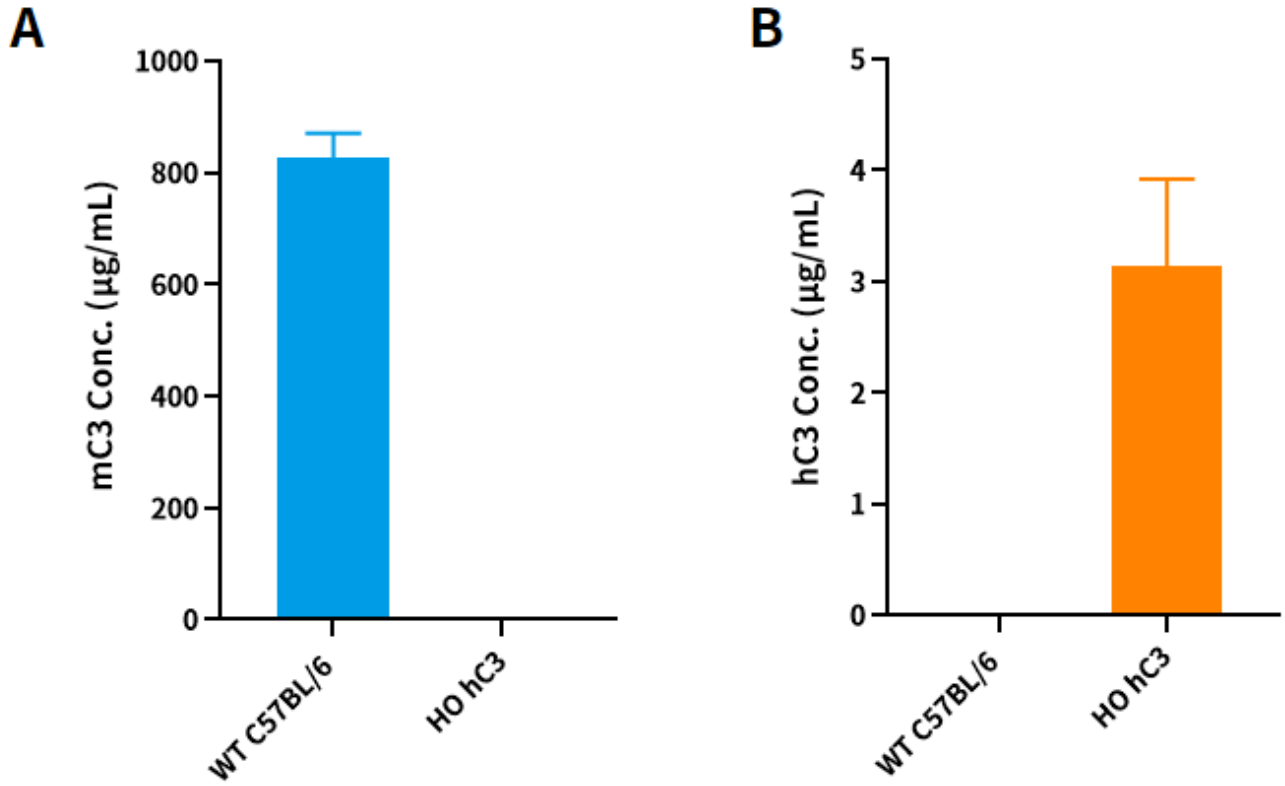


Fig 3. Detection of hC3 expression in serum by ELISA(n=3).

Note: The human Complement C3 ELISA Kit (ab108823) specifically recognized humanized C3.

Abbr. HO, homozygous; WT, wild type.

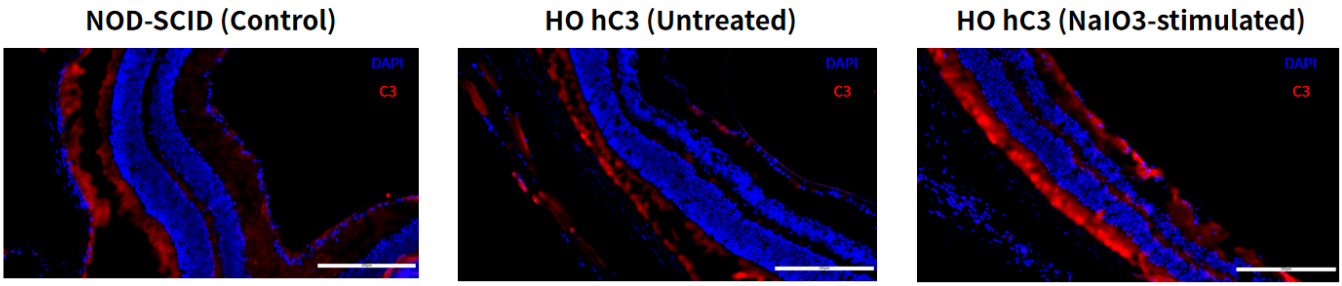


Fig 4. Detection of hC3 expression in eyes in HO hC3 KI mice by IF (n=5/group).

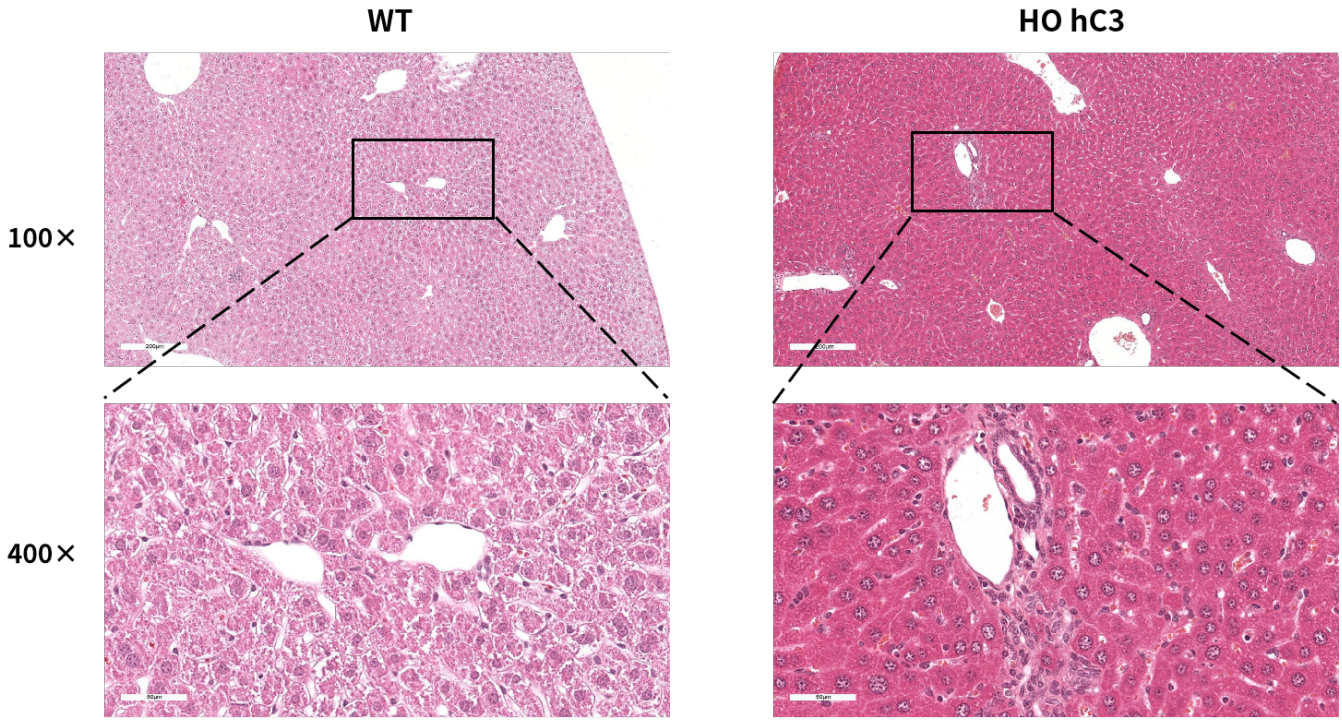


Fig 5. The HO hC3 mice showed inflammation in the portal region and bile duct hyperplasia (100× and 400×)

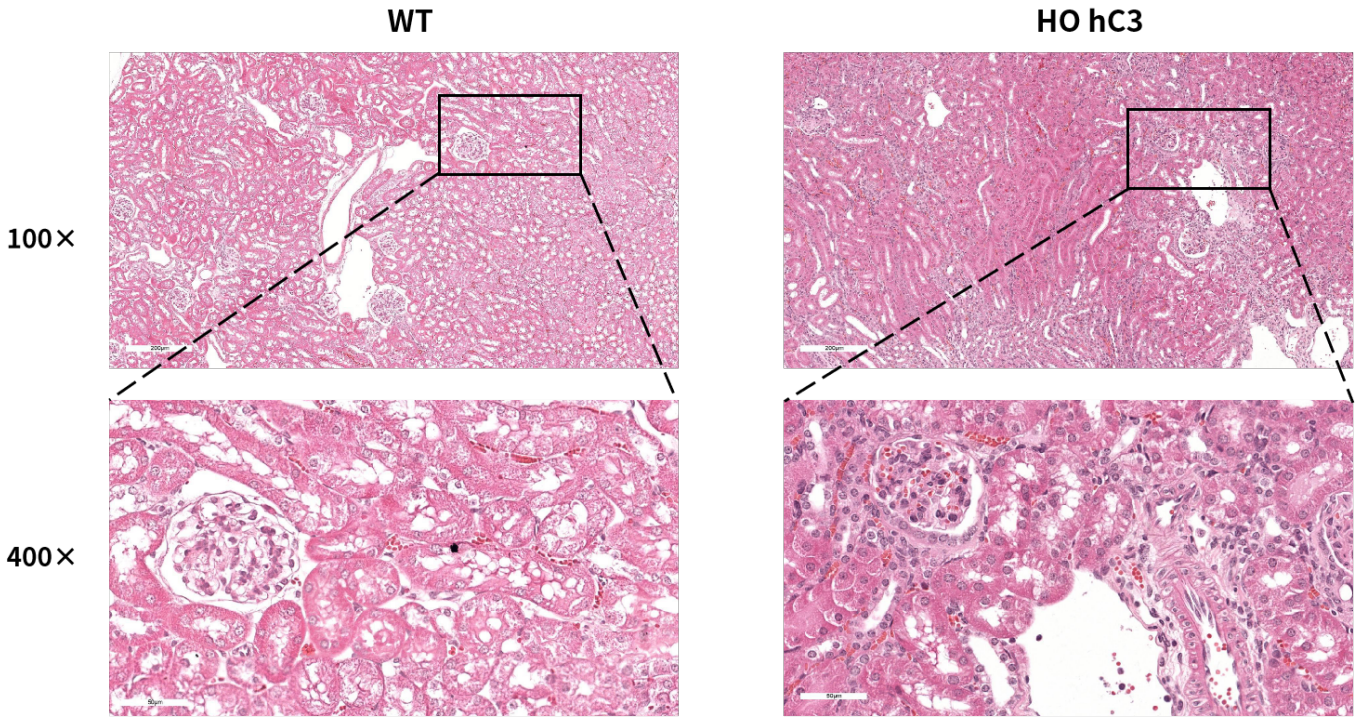


Fig 6. The HO hC3 mice showed glomerular sclerosis, glomerular atrophy and inflammation of the capillary tufts area (100× and 400×)

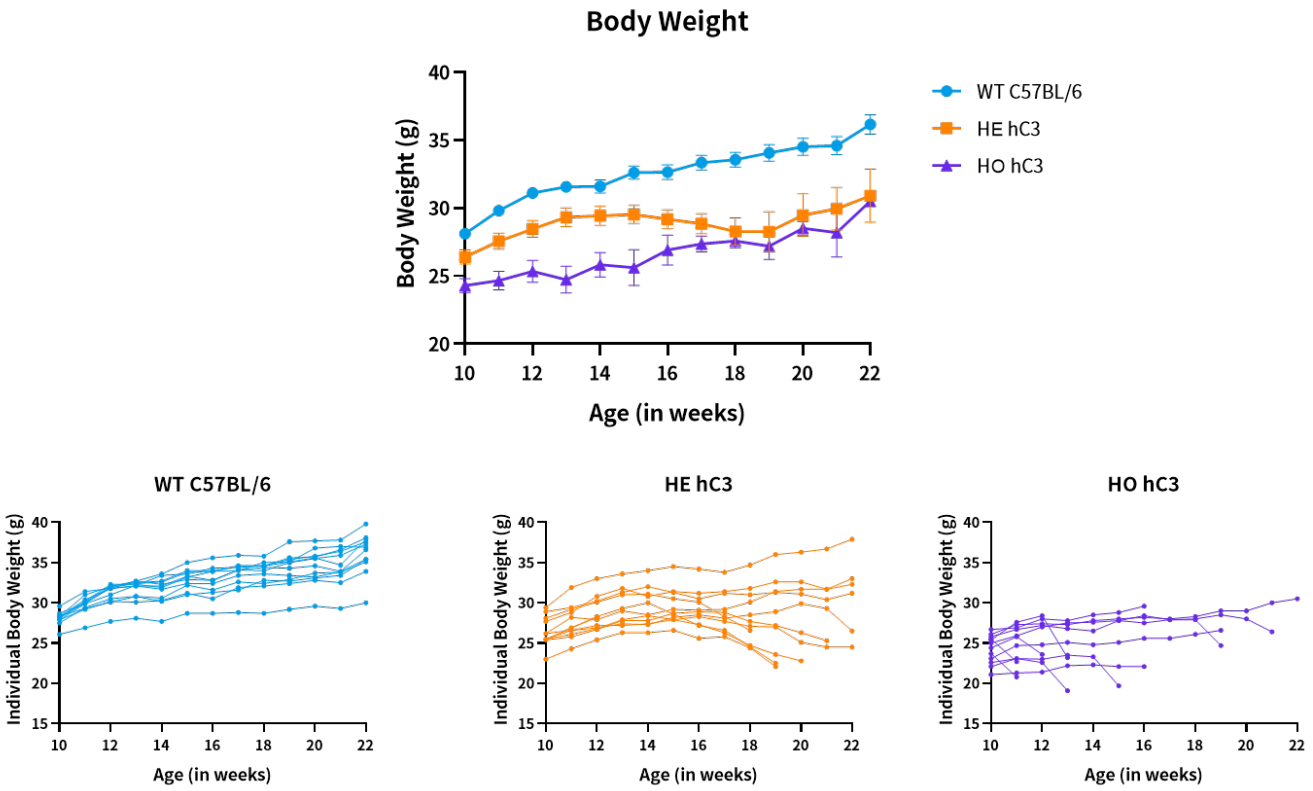


Fig 7. Body Weight of HO hC3 mouse (n=12/group).

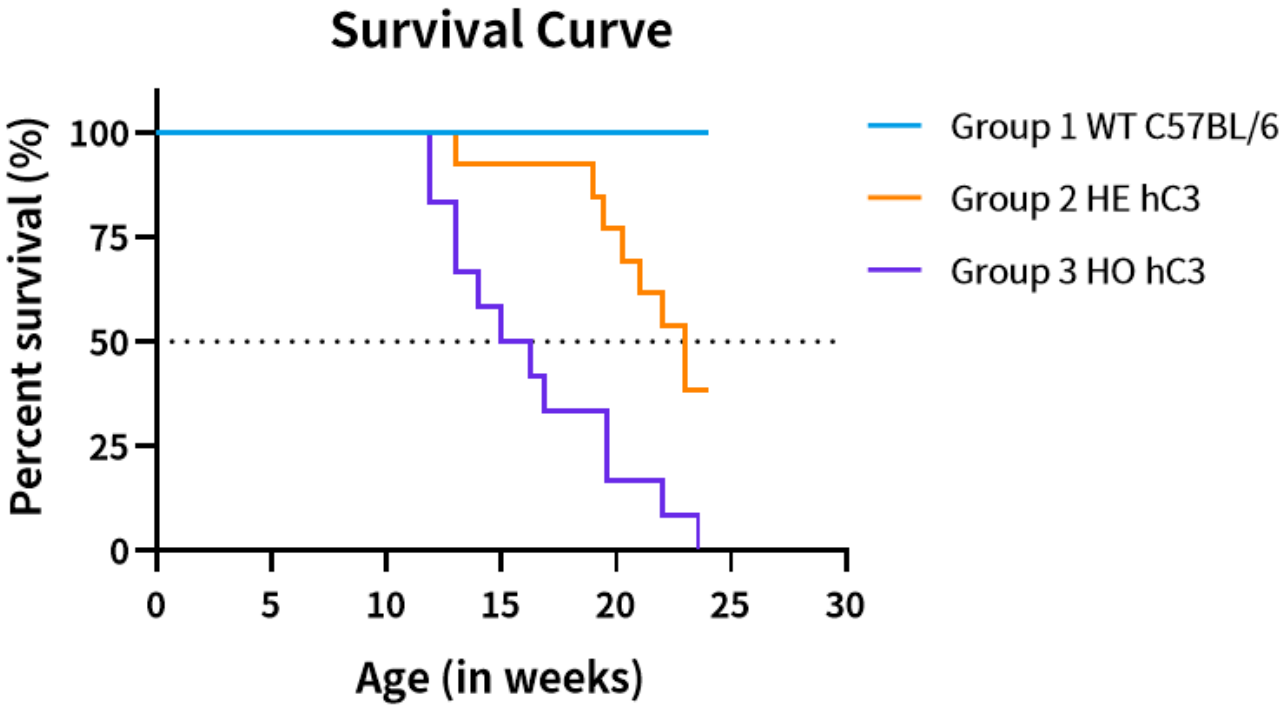


Fig 8. Survival curve of HO hC3 mouse (n=12/group).

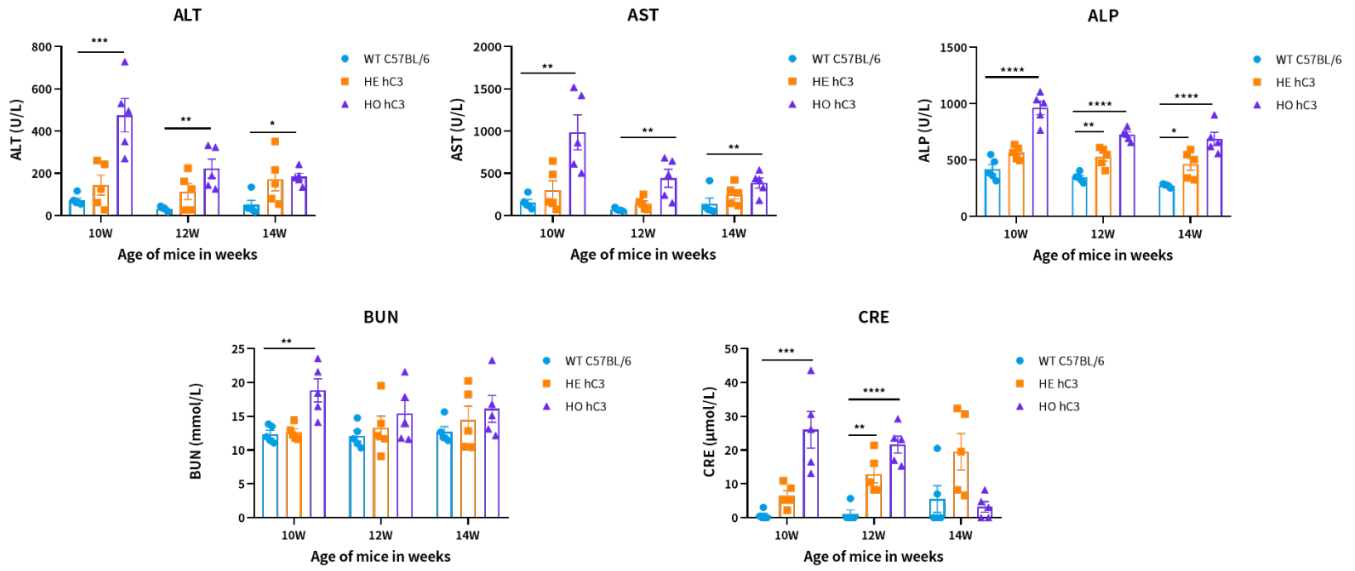


Fig 9. Serum Biochemistry of HO hC3 mouse (n=5/group).

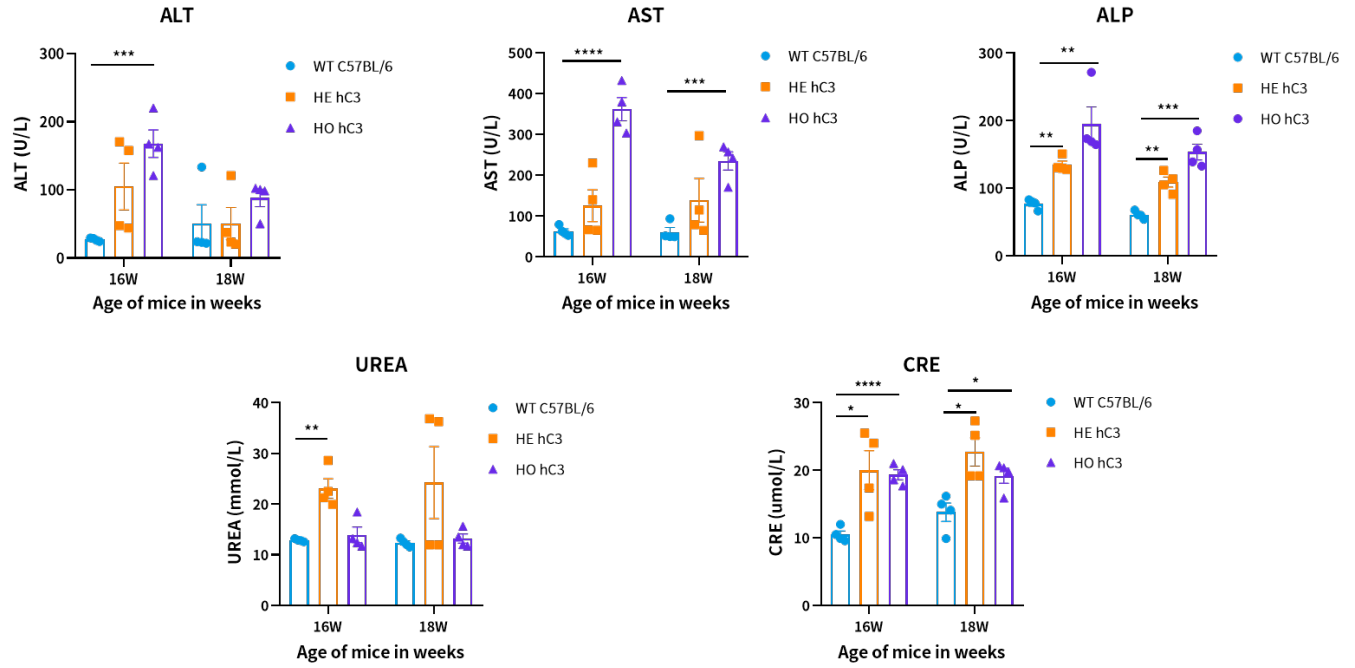


Fig 10. Serum Biochemistry of HO hC3 mouse (n=5/group, a different biochemical analyzer was used than in Fig 9).

	WT C57BL/6	HE hC3	HO hC3
15 weeks old	----------<b>- RACK:0002-01 ID. 20231103 G1 C. 00000003 Strip 11A 11/28/23 17:27 URO normal mg/dL BLD - mg/dL BIL - mg/dL KET - mg/dL GLU - mg/dL *PRO 1+ 30 mg/dL pH 7.0 NIT - LEU - c/uL CRE 10 mg/dL ALB 80 mg/L *P/C 2+ >=0.50g/gCr *A/C 2+ >=300 mg/gCr S.G 1.037 COLOR YELLOW CLOUD 2+	----------<b>- RACK:0002-02 ID. 20231103 G2 C. 00000004 Strip 11A 11/28/23 17:27 URO normal mg/dL BLD - mg/dL BIL - mg/dL *KET 1+ 10 mg/dL GLU - mg/dL PRO +- 15 mg/dL pH 5.5 NIT - LEU - c/uL CRE 10 mg/dL ALB 80 mg/L *P/C 2+ >=0.50g/gCr *A/C 2+ >=300 mg/gCr S.G 1.039 COLOR YELLOW CLOUD -	----------<b>- RACK:0002-03 ID. 20231103 G3 C. 00000005 Strip 11A 11/28/23 17:34 URO normal mg/dL BLD - mg/dL BIL - mg/dL *KET 1+ 10 mg/dL GLU - mg/dL PRO +- 15 mg/dL pH 5.5 NIT - LEU - c/uL CRE 50 mg/dL ALB 80 mg/L *P/C 1+ 0.30 g/gCr *A/C 1+ 150 mg/gCr S.G 1.035 COLOR YELLOW CLOUD 1+
16 weeks old	----------<b>- RACK:0002-04 ID. 20231110 G1 C. 00000006 Strip 11A 11/28/23 17:35 URO normal mg/dL BLD - mg/dL BIL - mg/dL KET - mg/dL GLU - mg/dL PRO +- 15 mg/dL pH 7.5 NIT - LEU - c/uL CRE 10 mg/dL ALB 30 mg/L *P/C 2+ >=0.50g/gCr *A/C 2+ >=300 mg/gCr S.G 1.030 COLOR STRAW CLOUD -	----------<b>- RACK:0002-05 ID. 20231110 G2 C. 00000007 Strip 11A 11/28/23 17:35 URO normal mg/dL BLD - mg/dL BIL - mg/dL *KET 1+ 10 mg/dL GLU - mg/dL PRO +- 15 mg/dL pH 6.0 NIT - LEU - c/uL CRE 50 mg/dL ALB 80 mg/L *P/C 1+ 0.30 g/gCr *A/C 1+ 150 mg/gCr S.G 1.045 COLOR YELLOW CLOUD 1+	----------<b>- RACK:0002-06 ID. 20231110 G3 C. 00000008 Strip 11A 11/28/23 17:35 *URO 1+ 2.0 mg/dL BLD +- 0.03 mg/dL BIL - mg/dL *KET 1+ 10 mg/dL GLU - mg/dL *PRO 1+ 30 mg/dL pH 5.5 NIT - LEU - c/uL CRE 10 mg/dL ALB 150 mg/L *P/C 2+ >=0.50g/gCr *A/C 2+ >=300 mg/gCr S.G 1.050 COLOR YELLOW CLOUD 2+

Fig 11. Urinalysis of HO hC3 mouse.

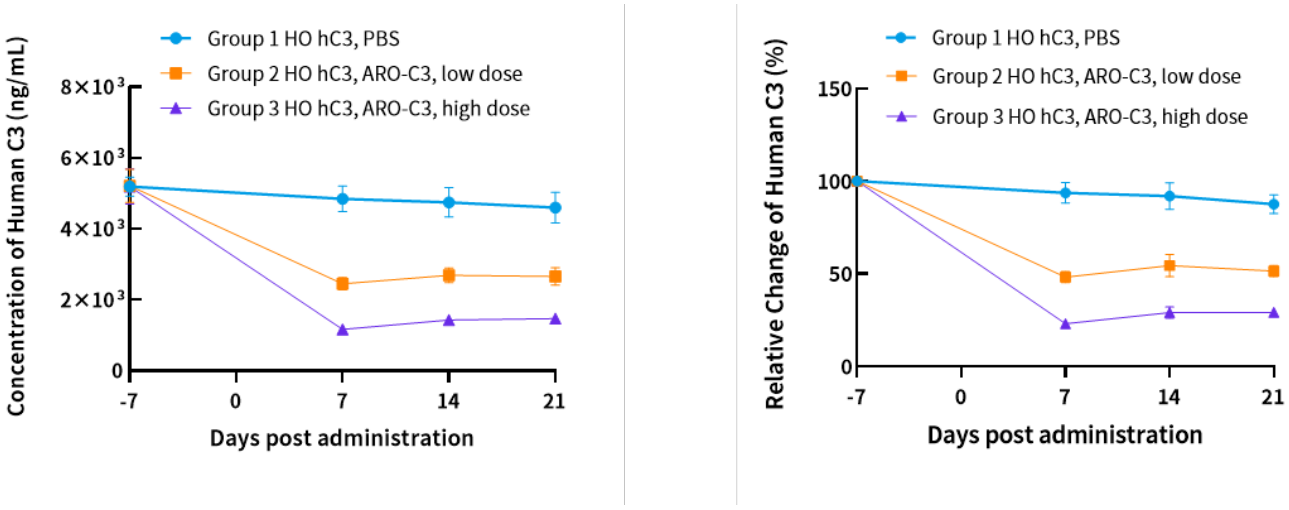
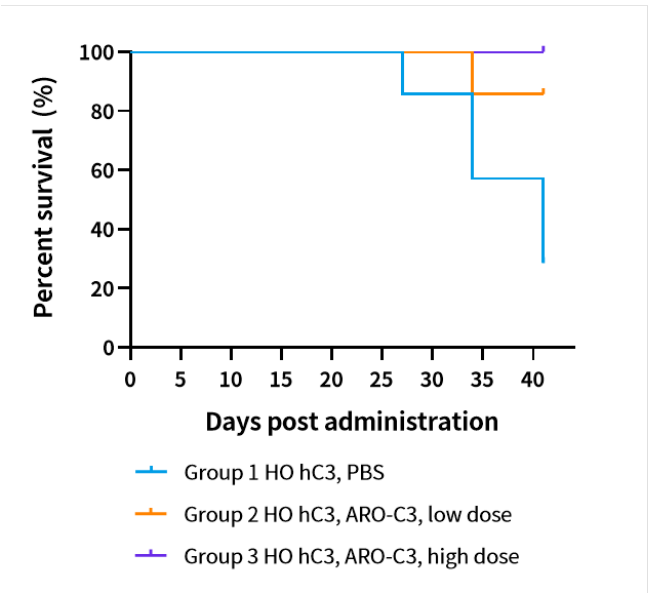


Fig 12. Single dose of ARO-C3 reduced serum hC3 levels of HO hC3 mouse (n=7-8/group).



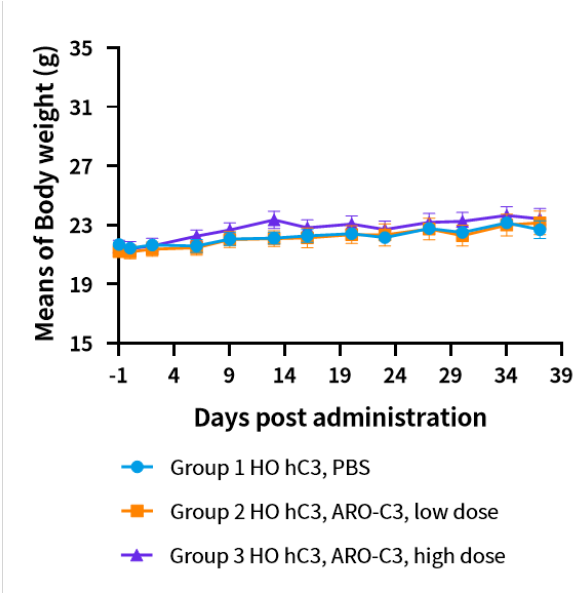


Fig 13. Survival curve and body weight of HO hC3 mouse post ARO-C3 treatment (n=7-8/group).