Lep-KO

Nomenclature	B6;129S-*Lep*^{tm1Smoc}
Cat. NO.	NM-KO-00034
Strain State	Repository Live

Gene Summary

Gene Symbol **Lep**	**Synonyms**	ob; obese
	NCBI ID	16846
	MGI ID	104663
	Ensembl ID	ENSMUSG00000059201
	Human Ortholog	LEP

Model Description

Exon 2 was replaced by Neo cassette.
Research Application: Insulin resistance,obesity,and type 2 diabetes etc.
*Literature published using this strain should indicate: Lep-KO mice (Cat. NO. NM-KO-00034) were purchased from Shanghai Model Organisms Center, Inc..

Disease Connection

Abdominal Obesity-Metabolic Syndrome	**Phenotype(s)**	MGI:4429407
	Reference(s)	Xu A, Liu J, Liu P, Jia M, Wang H, Tao L, Mitochondrial translocation of Nur77 induced by ROS contributed to cardiomyocyte apoptosis in metabolic syndrome. Biochem Biophys Res Commun. 2014 Apr 18;446(4):1184-9
Abdominal Obesity-Metabolic Syndrome 1	**Phenotype(s)**	MGI:2654709
	Reference(s)	Ikels K, Kuschel S, Fischer J, Kaisers W, Eberhard D, Ruther U, FTO is a relevant factor for the development of the metabolic syndrome in mice. PLoS One. 2014;9(8):e105349

Non-Alcoholic Fatty Liver Disease	**Phenotype(s)**	MGI:5807153
	Reference(s)	Trak-Smayra V, Paradis V, Massart J, Nasser S, Jebara V, Fromenty B, Pathology of the liver in obese and diabetic ob/ob and db/db mice fed a standard or high-calorie diet. Int J Exp Pathol. 2011 Dec;92(6):413-21
Obesity	**Phenotype(s)**	MGI:3623749
	Reference(s)	Barouch LA, Berkowitz DE, Harrison RW, O'Donnell CP, Hare JM, Disruption of leptin signaling contributes to cardiac hypertrophy independently of body weight in mice. Circulation. 2003 Aug 12;108(6):754-9
Type 2 Diabetes Mellitus	**Phenotype(s)**	MGI:5428893
	Reference(s)	Clee SM, Nadler ST, Attie AD, Genetic and genomic studies of the BTBR ob/ob mouse model of type 2 diabetes. Am J Ther. 2005 Nov-Dec;12(6):491-8

Validation Data

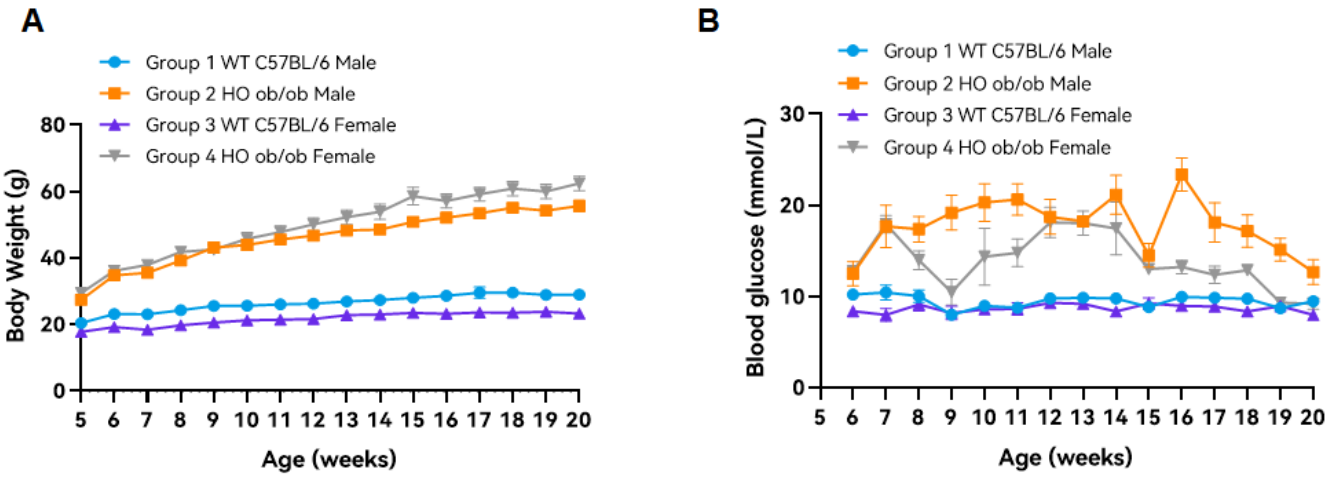

Fig1. Body weight and Blood glucose monitoring of ob/ob mice.

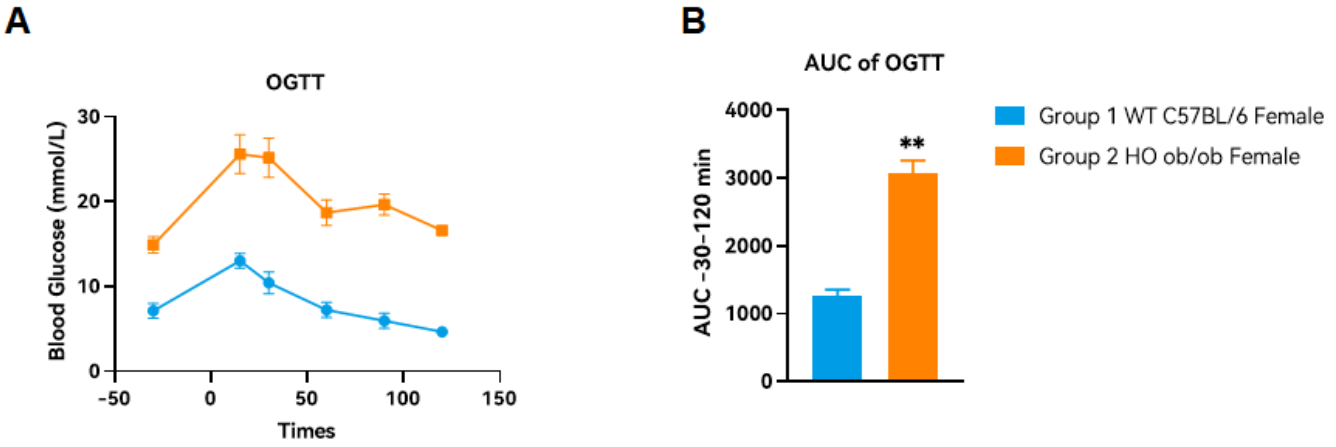

Fig2. Evaluation of Oral glucose tolerance test (OGTT) of female ob/ob mice.

Abbr. HO, homozygous; WT, wild type. **, P ≤ 0.01.

Note. The tested ob/ob and C57BL/6 mice were 6 weeks old.

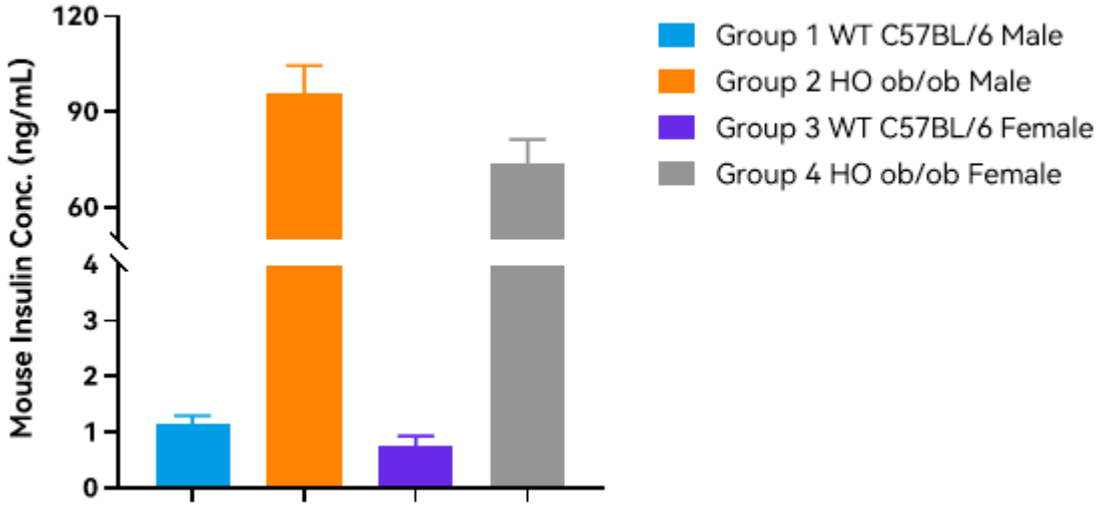

Fig3. Detection of insulin levels in serum by ELISA.

Abbr. Hom, homozygous; HE, heterozygous; WT, wild type.

Note. The tested ob/ob and C57BL/6 mice were 20 weeks old.

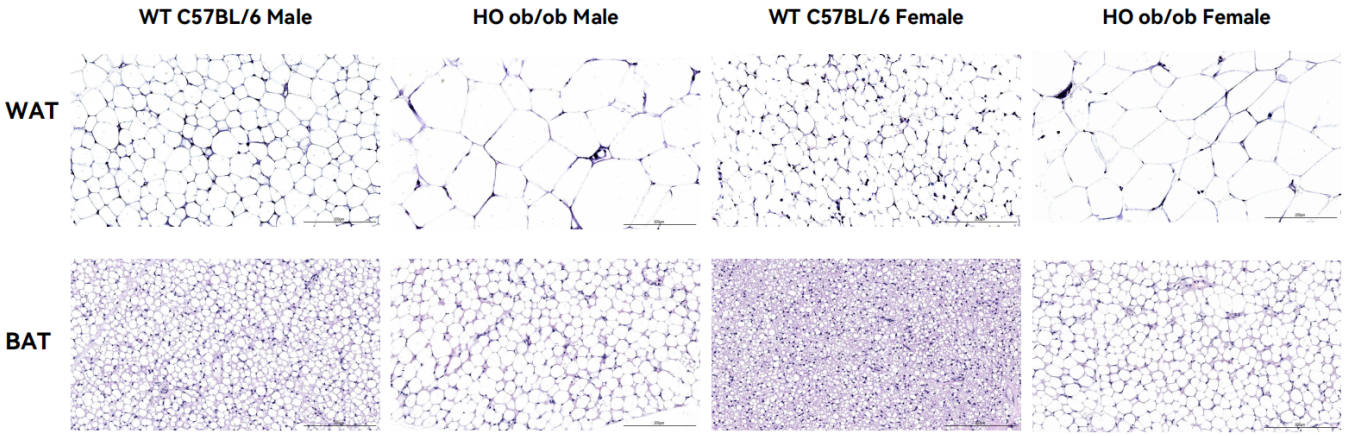

Fig4. H&E staining of the subcutaneous adipose tissue (SAT) in ob/ob mice.

Abbr. HO, homozygous; WT, wild type; WAT, white adipose tissue; BAT, brown adipose tissue.

Note. The tested ob/ob and C57BL/6 mice were 20 weeks old. Scale bar, 200 μm; magnification, × 20.

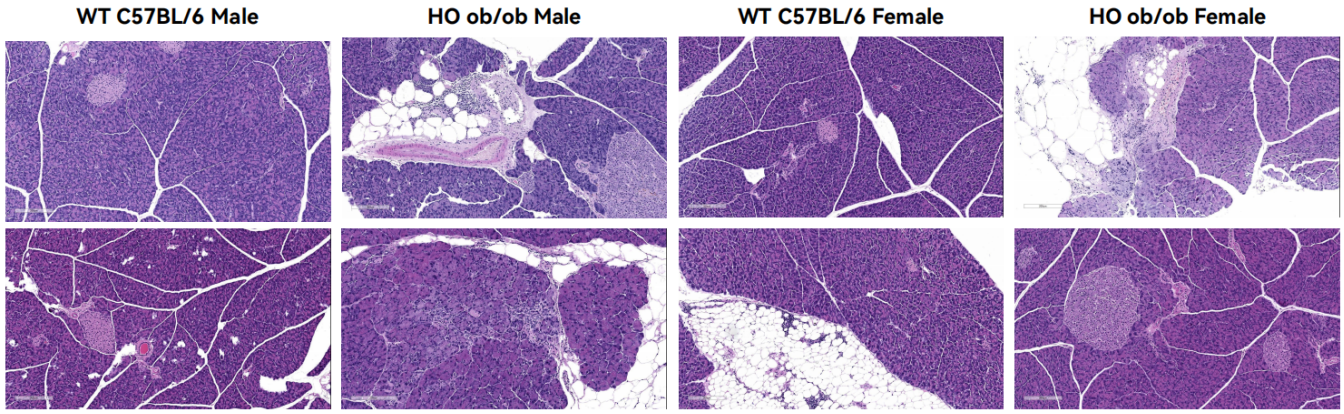

Fig5. Representative pictures of pancreas in ob/ob mice.

These results suggested the inflammatory cell infiltration of the pancreas in ob/ob mice.

Abbr. HO, homozygous; WT, wild type.

Note. The tested ob/ob and C57BL/6 mice were 20 weeks old. Scale bar, 200 μm; magnification, × 10.