

Mc4r-KO(2)

Nomenclature	C57BL/6Smoc- <i>Mc4r</i> ^{em1Smoc}
Cat. NO.	NM-KO-205021
Strain State	Embryo cryopreservation

Gene Summary

Gene Symbol Mc4r	Synonyms	Pkcp; Mc4-r
	NCBI ID	17202
	MGI ID	99457
	Ensembl ID	ENSMUSG000000047259
	Human Ortholog	MC4R

Model Description

exon 1 of Mc4r gene was deleted to generate Mc4r knockout mice via CRISPR/Cas9 mediated recombination.

*Literature published using this strain should indicate: Mc4r-KO(2) mice (Cat. NO. NM-KO-205021) were purchased from Shanghai Model Organisms Center, Inc..

Disease Connection

Obesity	Phenotype(s)	MGI:3850836 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Mc3r-KO(NM-KO-190652) mice.
	Reference(s)	Chen AS, Marsh DJ, Trumbauer ME, Frazier EG, Guan XM, Yu H, Rosenblum CI, Vongs A, Feng Y, Cao L, Metzger JM, Strack AM, Camacho RE, Mellin TN, Nunes CN, Min W, Fisher J, Gopal-Truter S, MacIntyre DE, Chen HY, Van Der Ploeg LH, Inactivation of the mouse melanocortin-3 receptor results in increased fat mass and reduced lean body mass. Nat Genet. 2000 Sep;26(1):97-102

Non-Alcoholic Steatohepatitis	Phenotype(s)	MGI:6405042
	Reference(s)	Matsumoto M, Yashiro H, Ogino H, Aoyama K, Nambu T, Nakamura S, Nishida M, Wang X, Erion DM, Kaneko M, Acetyl-CoA carboxylase 1 and 2 inhibition ameliorates steatosis and hepatic fibrosis in a MC4R knockout murine model of nonalcoholic steatohepatitis. PLoS One. 2020;15(1):e0228212
Obesity	Phenotype(s)	MGI:3579026
	Reference(s)	Huszar D, Lynch CA, Fairchild-Huntress V, Dunmore JH, Fang Q, Berkemeier LR, Gu W, Kesterson RA, Boston BA, Cone RD, Smith FJ, Campfield LA, Burn P, Lee F, Targeted disruption of the melanocortin-4 receptor results in obesity in mice. Cell. 1997 Jan 10;88(1):131-41

Validation Data

No data