

Psen1-Flox

Nomenclature	C57BL/6Smoc- <i>Psen1</i> ^{em1(flox)Smoc}
Cat. NO.	TBD
Strain State	Developing

Gene Summary

Gene Symbol Psen1	Synonyms	PS1, Ad3h, PS-1, S182
	NCBI ID	19164
	MGI ID	1202717
	Ensembl ID	ENSMUSG00000019969
	Human Ortholog	PSEN1

Model Description

These mice carry loxP sites flanking target exons of Psen1 gene. When crossed with a Cre recombinase-expressing strain, this strain is useful in eliminating tissue-specific conditional expression of Psen1 gene.

*Literature published using this strain should indicate: Psen1-Flox mice (Cat. NO. TBD) were purchased from Shanghai Model Organisms Center, Inc..

Disease Connection

Alzheimer's Disease 3	Phenotype(s)	MGI:2684657 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Thy1-cre mice.
	Reference(s)	Dewachter I, Reverse D, Caluwaerts N, Ris L, Kuiperi C, Van den Haute C, Spittaels K, Umans L, Serneels L, Thiry E, Moechars D, Mercken M, Godaux E, Van Leuven F, Neuronal deficiency of presenilin 1 inhibits amyloid plaque formation and corrects hippocampal long-term potentiation but not a cognitive defect of amyloid precursor protein [V717I] transgenic mice. J Neurosci. 2002 May 1;22(9):3445-53

Alzheimer's Disease	Phenotype(s)	MGI:5754385 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Psen2-Flox(NM-CKO-2113883) and Camk2a-cre mice.
	Reference(s)	Xia D, Watanabe H, Wu B, Lee SH, Li Y, Tsvetkov E, Bolshakov VY, Shen J, Kelleher RJ 3rd, Presenilin-1 Knockin Mice Reveal Loss-of-Function Mechanism for Familial Alzheimer's Disease. Neuron. 2015 Mar 4;85(5):967-81
Alzheimer's Disease 4	Phenotype(s)	MGI:3045186 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Psen2-Flox(NM-CKO-2113883) and Camk2a-cre mice.
	Reference(s)	Feng R, Wang H, Wang J, Shrom D, Zeng X, Tsien JZ, Forebrain degeneration and ventricle enlargement caused by double knockout of Alzheimer's presenilin-1 and presenilin-2. Proc Natl Acad Sci U S A. 2004 May 25;101(21):8162-7
Alzheimer's Disease	Phenotype(s)	MGI:3045183 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Camk2a-cre mice.
	Reference(s)	Feng R, Rampon C, Tang YP, Shrom D, Jin J, Kyin M, Sopher B, Martin GM, Kim SH, Langdon RB, Sisodia SS, Tsien JZ, Deficient neurogenesis in forebrain-specific presenilin-1 knockout mice is associated with reduced clearance of hippocampal memory traces. Neuron. 2001 Dec 6;32(5):911-26

Validation Data

No data