Cdk4-KO

Nomenclature	C57BL/6Smoc-*Cdk4*^{em1Smoc}
Cat. NO.	NM-KO-190614
Strain State	Developing

Gene Summary

Gene Symbol **Cdk4**	**Synonyms**	Crk3
	NCBI ID	12567
	MGI ID	88357
	Ensembl ID	ENSMUSG00000006728
	Human Ortholog	CDK4

Model Description

Exon 3-7 of Cdk4 gene was deleted to generate Cdk4 knockout mice.
Research Application: The protein encoded by this gene is a member of the Ser/Thr protein kinase family.It is a catalytic subunit of the protein kinase complex that is important for cell cycle G1 phase progression. The activity of this kinase is restricted to the G1-S phase, which is controlled by the regulatory subunits D-type cyclins and CDK inhibitor p16(INK4a). This kinase was shown to be responsible for the phosphorylation of retinoblastoma gene product (Rb).
*Literature published using this strain should indicate: Cdk4-KO mice (Cat. NO. NM-KO-190614) were purchased from Shanghai Model Organisms Center, Inc..

Disease Connection

Type 1 Diabetes Mellitus	**Phenotype(s)**	MGI:2386959
	Reference(s)	Rane SG, Dubus P, Mettus RV, Galbreath EJ, Boden G, Reddy EP, Barbacid M, Loss of Cdk4 expression causes insulin-deficient diabetes and Cdk4 activation results in beta-islet cell hyperplasia. Nat Genet. 1999 May;22(1):44-52

Validation Data

No data