

Stk11-Frox

Nomenclature	C57BL/6Smoc- <i>Stk11</i> ^{em1(frox)Smoc}
Cat. NO.	NM-CKO-200251
Strain State	Embryo cryopreservation

Gene Summary

Gene Symbol Stk11	Synonyms	Lkb1; Par-4; R75140; AA408040
	NCBI ID	20869
	MGI ID	1341870
	Ensembl ID	ENSMUSG000000003068
	Human Ortholog	STK11

Model Description

These mice carry rox sites flanking exon3-6 of Stk11 gene. When crossed with a Dre recombinase-expressing strain, this strain is useful in eliminating tissue-specific conditional expression of Stk11 gene.

*Literature published using this strain should indicate: Stk11-Frox mice (Cat. NO. NM-CKO-200251) were purchased from Shanghai Model Organisms Center, Inc..

Disease Connection

Endometrial Cancer	Phenotype(s)	MGI:4438263 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Sprr2f-cre mice.
	Reference(s)	Contreras CM, Akbay EA, Gallardo TD, Haynie JM, Sharma S, Tagao O, Bardeesy N, Takahashi M, Settleman J, Wong KK, Castrillon DH, Lkb1 inactivation is sufficient to drive endometrial cancers that are aggressive yet highly responsive to mTOR inhibitor monotherapy. Dis Model Mech. 2010 Mar-Apr;3(3-4):181-93

Urinary Bladder Cancer	Phenotype(s)	MGI:5789953 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Pten-Flox(NM-CKO-18004) and Cyp1a1-cre/ERT mice.
	Reference(s)	Shorning BY, Griffiths D, Clarke AR, Lkb1 and Pten synergise to suppress mTOR-mediated tumorigenesis and epithelial-mesenchymal transition in the mouse bladder. PLoS One. 2011;6(1):e16209
Peutz-Jeghers Syndrome	Phenotype(s)	MGI:3814590 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Pdx1-cre mice.
	Reference(s)	Hezel AF, Gurumurthy S, Granot Z, Swisa A, Chu GC, Bailey G, Dor Y, Bardeesy N, Depinho RA, Pancreatic LKB1 deletion leads to acinar polarity defects and cystic neoplasms. Mol Cell Biol. 2008 Apr;28(7):2414-25
Peutz-Jeghers syndrome	Phenotype(s)	MGI:3814722 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with KRT14-cre mice.
	Reference(s)	Gurumurthy S, Hezel AF, Berger JH, Bosenberg MW, Bardeesy N, LKB1 deficiency sensitizes mice to carcinogen-induced tumorigenesis. Cancer Res. 2008 Jan 1;68(1):55-63
Skin Melanoma	Phenotype(s)	MGI:5752239 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Cdkn2a-Flox(2)(NM-CKO-200151), Nras-Flox(NM-CKO-2100519) and Tyr-cre/ERT2 mice.
	Reference(s)	Burd CE, Liu W, Huynh MV, Waqas MA, Gillahan JE, Clark KS, Fu K, Martin BL, Jeck WR, Souroullas GP, Darr DB, Zedek DC, Miley MJ, Baguley BC, Campbell SL, Sharpless NE, Mutation-specific RAS oncogenicity explains NRAS codon 61 selection in melanoma. Cancer Discov. 2014 Dec;4(12):1418-29

Peutz-Jeghers Syndrome	Phenotype(s)	MGI:5440238 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Amhr2-Cre mice.
	Reference(s)	Tanwar PS, Kaneko-Tarui T, Zhang L, Teixeira JM, Altered LKB1/AMPK/TSC1/TSC2/mTOR signaling causes disruption of Sertoli cell polarity and spermatogenesis. Hum Mol Genet. 2012 Oct 15;21(20):4394-405

Validation Data

No data