

Ctnnb1-Flox

Nomenclature	C57BL/6Smoc- <i>Ctnnb1</i> ^{em1(flox)Smoc}
Cat. NO.	NM-CKO-200154
Strain State	Sperm cryopreservation

Gene Summary

Gene Symbol Ctnnb1	Synonyms	Bfc, Mesc, Catnb
	NCBI ID	12387
	MGI ID	88276
	Ensembl ID	ENSMUSG00000006932
	Human Ortholog	CTNNB1

Model Description

These mice carry loxP sites flanking exon 2-6 of Ctnnb1 gene. When crossed with a Cre recombinase-expressing strain, this strain is useful in eliminating tissue-specific conditional expression of Ctnnb1 gene.

Research Application: MicroRNA and CDK-mediated phosphorylation and Cdc6 removal in cardiomyocyte hypertrophy

*Literature published using this strain should indicate: Ctnnb1-Flox mice (Cat. NO. NM-CKO-200154) were purchased from Shanghai Model Organisms Center, Inc..

Disease Connection

Autism Spectrum Disorder	Phenotype(s)	MGI:5812797 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Pvalb-cre mice.
	Reference(s)	Dong F, Jiang J, McSweeney C, Zou D, Liu L, Mao Y, Deletion of CTNNB1 in inhibitory circuitry contributes to autism-associated behavioral defects. Hum Mol Genet. 2016 Jul 1;25(13):2738-2751

Ovarian Cancer	Phenotype(s)	MGI:5432226 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Pten-Flox(NM-CKO-18004) and CYP19A1-cre mice.
	Reference(s)	Richards JS, Fan HY, Liu Z, Tsoi M, Lague MN, Boyer A, Boerboom D, Either Kras activation or Pten loss similarly enhance the dominant-stable CTNNB1-induced genetic program to promote granulosa cell tumor development in the ovary and testis. Oncogene. 2012 Mar 22;31(12):1504-20
Testicular Granulosa Cell Tumor	Phenotype(s)	MGI:4941746 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Pten-Flox(NM-CKO-18004) and Amhr2-Cre mice.
	Reference(s)	Boyer A, Paquet M, Lague MN, Hermo L, Boerboom D, Dysregulation of WNT/CTNNB1 and PI3K/AKT signaling in testicular stromal cells causes granulosa cell tumor of the testis. Carcinogenesis. 2009 May;30(5):869-78
Prostate Cancer	Phenotype(s)	MGI:3836579 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Pbsn-cre mice.
	Reference(s)	Pearson HB, Phesse TJ, Clarke AR, K-ras and Wnt signaling synergize to accelerate prostate tumorigenesis in the mouse. Cancer Res. 2009 Jan 1;69(1):94-101
Urinary Bladder Cancer	Phenotype(s)	MGI:5790500 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Kras-LSL-G12D(NM-KI-190003) and Upk2-cre mice.
	Reference(s)	Ahmad I, Patel R, Liu Y, Singh LB, Taketo MM, Wu XR, Leung HY, Sansom OJ, Ras mutation cooperates with beta-catenin activation to drive bladder tumourigenesis. Cell Death Dis. 2011;2:e124

Ovarian Cancer	Phenotype(s)	MGI:5432224 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Kras-LSL-G12D(NM-KI-190003) and CYP19A1-cre mice.
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ovarian cancer	Phenotype(s)	MGI:5432231 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Kras-LSL-G12D(NM-KI-190003) and Amhr2-Cre mice.
	Reference(s)	Richards JS, Fan HY, Liu Z, Tsoi M, Lague MN, Boyer A, Boerboom D, Either Kras activation or Pten loss similarly enhance the dominant-stable CTNNB1-induced genetic program to promote granulosa cell tumor development in the ovary and testis. Oncogene. 2012 Mar 22;31(12):1504-20
Lung Cancer	Phenotype(s)	MGI:5141741 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Fgfr3-Flox(NM-CKO-2101148) and Upk2-cre mice.
	Reference(s)	Ahmad I, Singh LB, Foth M, Morris CA, Taketo MM, Wu XR, Leung HY, Sansom OJ, Iwata T, K-Ras and {beta}-catenin mutations cooperate with Fgfr3 mutations in mice to promote tumorigenesis in the skin and lung, but not in the bladder. Dis Model Mech. 2011 Jul-Aug;4(4):548-55
Ovarian Cancer	Phenotype(s)	MGI:5432223 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with CYP19A1-cre mice.
	Reference(s)	Richards JS, Fan HY, Liu Z, Tsoi M, Lague MN, Boyer A, Boerboom D, Either Kras activation or Pten loss similarly enhance the dominant-stable CTNNB1-induced genetic program to promote granulosa cell tumor development in the ovary and testis. Oncogene. 2012 Mar 22;31(12):1504-20

ovarian cancer	Phenotype(s)	MGI:5432232 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Ctnnb1-Flox(NM-CKO-200154) and Amhr2-Cre mice.
	Reference(s)	Richards JS, Fan HY, Liu Z, Tsoi M, Lague MN, Boyer A, Boerboom D, Either Kras activation or Pten loss similarly enhance the dominant-stable CTNNB1-induced genetic program to promote granulosa cell tumor development in the ovary and testis. Oncogene. 2012 Mar 22;31(12):1504-20
Otitis Media	Phenotype(s)	MGI:3706580 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with CMV-cre mice.
	Reference(s)	Schmidt-Ullrich R, Aebischer T, Hulsken J, Birchmeier W, Klemm U, Scheidereit C, Requirement of NF-kappaB/Rel for the development of hair follicles and other epidermal appendices. Development. 2001 Oct;128(19):3843-53
Melanoma	Phenotype(s)	MGI:4418449 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Cdkn2a-Flox(2)(NM-CKO-200151), Pten-Flox(NM-CKO-18004) and Tyr-cre/ERT2 mice.
	Reference(s)	Held MA, Curley DP, Dankort D, McMahon M, Muthusamy V, Bosenberg MW, Characterization of melanoma cells capable of propagating tumors from a single cell. Cancer Res. 2010 Jan 1;70(1):388-97
Urinary Bladder Cancer	Phenotype(s)	MGI:5790498 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Cdkn1a-Flox(NM-CKO-200033) and Upk2-cre mice.
	Reference(s)	Ahmad I, Patel R, Liu Y, Singh LB, Taketo MM, Wu XR, Leung HY, Sansom OJ, Ras mutation cooperates with beta-catenin activation to drive bladder tumourigenesis. Cell Death Dis. 2011;2:e124

Salivary Gland Carcinoma	Phenotype(s)	MGI:5508218 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Bmpr1a-Flox(NM-CKO-2100038) and KRT14-cre mice.
	Reference(s)	Wend P, Fang L, Zhu Q, Schipper JH, Loddenkemper C, Kosel F, Brinkmann V, Eckert K, Hindersin S, Holland JD, Lehr S, Kahn M, Ziebold U, Birchmeier W, Wnt/beta-catenin signalling induces MLL to create epigenetic changes in salivary gland tumours. EMBO J. 2013 Jul 17;32(14):1977-89
Ovarian Cancer	Phenotype(s)	MGI:5432228 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Amhr2-Cre mice.
	Reference(s)	Richards JS, Fan HY, Liu Z, Tsoi M, Lague MN, Boyer A, Boerboom D, Either Kras activation or Pten loss similarly enhance the dominant-stable CTNNB1-induced genetic program to promote granulosa cell tumor development in the ovary and testis. Oncogene. 2012 Mar 22;31(12):1504-20

Validation Data

No data