Apc-Flox

Nomenclature	C57BL/6Smoc-*Apc*$^{tm2(flox)Smoc}$
Cat. NO.	NM-CKO-200013
Strain State	Repository Live

Gene Summary

Gene Symbol **Apc**	**Synonyms**	CC1， Min， mAPC， AI047805， AU020952， AW124434
	NCBI ID	11789
	MGI ID	88039
	Ensembl ID	ENSMUSG00000005871
	Human Ortholog	APC
	Human Ortholog Associated Diseases by GWAS	大肠癌

Model Description

These mice carry loxP sites flanking exon 15 of Apc gene. When crossed with a Cre recombinase-expressing strain, this strain is useful in eliminating tissue-specific conditional expression of Apc gene.

Research Application: Intestinal tumor research

*Literature published using this strain should indicate: Apc-Flox mice (Cat. NO. NM-CKO-200013) were purchased from Shanghai Model Organisms Center, Inc..

Disease Connection

Colorectal Cancer	**Phenotype(s)**	MGI:5702414 Note：The expected phenotype(s) may be observed in the above-mentioned mice that bred with Vil1-cre/ERT2 mice.
	Reference(s)	Levy J, Cacheux W, Bara MA, L'Hermitte A, Lepage P, Fraudeau M, Trentesaux C, Lemarchand J, Durand A, Crain AM, Marchiol C, Renault G, Dumont F, Letourneur F, Delacre M, Schmitt A, Terris B, Perret C, Chamaillard M, Couty JP, Romagnolo B, Intestinal inhibition of Atg7 prevents tumour initiation through a microbiome-influenced immune response and suppresses tumour growth. Nat Cell Biol. 2015 Aug;17(8):1062-73
Ovarian Cancer	**Phenotype(s)**	MGI:5779541 Note：The expected phenotype(s) may be observed in the above-mentioned mice that bred with Pten-Flox(NM-CKO-18004) and Ad-Cre mice.
	Reference(s)	Wu R, Hendrix-Lucas N, Kuick R, Zhai Y, Schwartz DR, Akyol A, Hanash S, Misek DE, Katabuchi H, Williams BO, Fearon ER, Cho KR, Mouse model of human ovarian endometrioid adenocarcinoma based on somatic defects in the Wnt/beta-catenin and PI3K/Pten signaling pathways. Cancer Cell. 2007 Apr;11(4):321-33
ovarian cancer	**Phenotype(s)**	MGI:5583019 Note：The expected phenotype(s) may be observed in the above-mentioned mice that bred with Pgr-Cre mice.
	Reference(s)	van der Horst PH, van der Zee M, Heijmans-Antonissen C, Jia Y, DeMayo FJ, Lydon JP, van Deurzen CH, Ewing PC, Burger CW, Blok LJ, A mouse model for endometrioid ovarian cancer arising from the distal oviduct. Int J Cancer. 2014 Sep 1;135(5):1028-37

Pancreatic Mucinous Cystadenoma	**Phenotype(s)**	MGI:5898453 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with P53-Flox(2)(NM-CKO-190067) and Pdx1-cre mice.
	Reference(s)	Kuo TL, Weng CC, Kuo KK, Chen CY, Wu DC, Hung WC, Cheng KH, APC haploinsufficiency coupled with p53 loss sufficiently induces mucinous cystic neoplasms and invasive pancreatic carcinoma in mice. Oncogene. 2016 Apr 28;35(17):2223-34
Familial Adenomatous Polyposis	**Phenotype(s)**	MGI:3590232 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Lck-cre mice.
	Reference(s)	Gounaris E, Erdman SE, Restaino C, Gurish MF, Friend DS, Gounari F, Lee DM, Zhang G, Glickman JN, Shin K, Rao VP, Poutahidis T, Weissleder R, McNagny KM, Khazaie K, Mast cells are an essential hematopoietic component for polyp development. Proc Natl Acad Sci U S A. 2007 Dec 11;104(50):19977-82
Colorectal Cancer	**Phenotype(s)**	MGI:4456428 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Fabp1-cre mice.
	Reference(s)	Robanus-Maandag EC, Koelink PJ, Breukel C, Salvatori DC, Jagmohan-Changur SC, Bosch CA, Verspaget HW, Devilee P, Fodde R, Smits R, A new conditional Apc-mutant mouse model for colorectal cancer. Carcinogenesis. 2010 May;31(5):946-52
colorectal cancer	**Phenotype(s)**	MGI:3844311 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with CDX2-cre mice.
	Reference(s)	Hinoi T, Akyol A, Theisen BK, Ferguson DO, Greenson JK, Williams BO, Cho KR, Fearon ER, Mouse model of colonic adenoma-carcinoma progression based on somatic Apc inactivation. Cancer Res. 2007 Oct 15;67(20):9721-30

Validation Data

No data