

Pten-Flox

品系全名 C57BL/6Smoc-*Pten*^{em1(flox)Smoc}

目录号 NM-CKO-18004

品系状态 活体

基因信息

基因名 Pten	基因曾用名	TEP1; MMAC1; AI463227; PTENbeta; 2310035O07Rik; A130070J02Rik; B430203M17Rik
	NCBI ID	19211
	MGI ID	109583
	Ensembl ID	ENSMUSG00000013663
	人类同源基因	PTEN

品系描述

利用CRISPR基因编辑技术，flox Pten基因exon5，建立Pten条件性基因敲除小鼠模型。可与组织特异性的Cre工具鼠交配，在表达Cre酶的细胞中，条件性敲除Pten基因。

应用领域：肿瘤研究

*使用本品系发表的文献需注明: Pten-Flox mice (Cat. NO. NM-CKO-18004) were purchased from Shanghai Model Organisms Center, Inc..

疾病预测

B细胞淋巴瘤 B-Cell Lymphoma	近似模型的表型	MGI:5013951 注：该品系与Inpp5d-Flox(NM-CKO-2116753)和CD19-cre工具鼠交配才可能获得预期表型
	参考文献	Miletic AV, Anzelon-Mills AN, Mills DM, Omori SA, Pedersen IM, Shin DM, Ravetch JV, Bolland S, Morse HC 3rd, Rickert RC, Coordinate suppression of B cell lymphoma by PTEN and SHIP phosphatases. J Exp Med. 2010 Oct 25;207(11):2407-20

Cowden综合征 Cowden Syndrome	近似模型的表型	MGI:3714016 注：该品系与Gfap-cre工具鼠交配才可能获得预期表型
	参考文献	Backman SA, Stambolic V, Suzuki A, Haight J, Elia A, Pretorius J, Tsao MS, Shannon P, Bolon B, Ivy GO, Mak TW, Deletion of Pten in mouse brain causes seizures, ataxia and defects in soma size resembling Lhermitte-Duclos disease. Nat Genet. 2001 Dec;29(4):396-403
Cowden综合征 Cowden Syndrome	近似模型的表型	MGI:3813525 注：该品系与KRT14-cre工具鼠交配才可能获得预期表型
	参考文献	Squareze CH, Castilho RM, Gutkind JS, Chemoprevention and treatment of experimental Cowden's disease by mTOR inhibition with rapamycin. Cancer Res. 2008 Sep 1;68(17):7066-72
Cowden综合征 Cowden Syndrome	近似模型的表型	MGI:4829793 注：该品系与MMTV-cre工具鼠交配才可能获得预期表型
	参考文献	Li G, Robinson GW, Lesche R, Martinez-Diaz H, Jiang Z, Rozengurt N, Wagner KU, Wu DC, Lane TF, Liu X, Hennighausen L, Wu H, Conditional loss of PTEN leads to precocious development and neoplasia in the mammary gland. Development. 2002 Sep;129(17):4159-70
Cowden综合征 Cowden Syndrome	近似模型的表型	MGI:4836620 注：该品系与Mx1-cre工具鼠交配才可能获得预期表型
	参考文献	He XC, Yin T, Grindley JC, Tian Q, Sato T, Tao WA, Dirisina R, Porter-Westpfahl KS, Hembree M, Johnson T, Wiedemann LM, Barrett TA, Hood L, Wu H, Li L, PTEN-deficient intestinal stem cells initiate intestinal polyposis. Nat Genet. 2007 Feb;39(2):189-98
Cowden综合征 Cowden Syndrome	近似模型的表型	MGI:5506904 注：该品系与KRT14-cre工具鼠交配才可能获得预期表型
	参考文献	Wang Q, Von T, Bronson R, Ruan M, Mu W, Huang A, Maira SM, Zhao JJ, Spatially distinct roles of class Ia PI3K isoforms in the development and maintenance of PTEN hamartoma tumor syndrome. Genes Dev. 2013 Jul 15;27(14):1568-80

Cowden综合征 Cowden Syndrome	近似模型的表型	MGI:5825461 注：该品系与Nes-cre/ERT2工具鼠交配才可能获得预期表型
	参考文献	Zhu G, Rankin SL, Larson JD, Zhu X, Chow LM, Qu C, Zhang J, Ellison DW, Baker SJ, PTEN Signaling in the Postnatal Perivascular Progenitor Niche Drives Medulloblastoma Formation. <i>Cancer Res.</i> 2017 Jan 01;77(1):123-133
von Hippel-Lindau病 Von Hippel-Lindau Disease	近似模型的表型	MGI:4839497 注：该品系与Vhl-Flox(2)(NM-CKO-200232)和Cdh16-cre工具鼠交配才可能获得预期表型
	参考文献	Frew IJ, Minola A, Georgiev S, Hitz M, Moch H, Richard S, Vortmeyer AO, Krek W, Combined VHLH and PTEN mutation causes genital tract cystadenoma and squamous metaplasia. <i>Mol Cell Biol.</i> 2008 Jul;28(14):4536-48
von Hippel-Lindau病 Von Hippel-Lindau Disease	近似模型的表型	MGI:4943534 注：该品系与Vhl-Flox(2)(NM-CKO-200232)和Cdh16-cre工具鼠交配才可能获得预期表型
	参考文献	Frew IJ, Thoma CR, Georgiev S, Minola A, Hitz M, Montani M, Moch H, Krek W, pVHL and PTEN tumour suppressor proteins cooperatively suppress kidney cyst formation. <i>EMBO J.</i> 2008 Jun 18;27(12):1747-57
膀胱癌 Urinary Bladder Cancer	近似模型的表型	MGI:5004866 注：该品系与Fabp1-cre工具鼠交配才可能获得预期表型
	参考文献	Tsuruta H, Kishimoto H, Sasaki T, Horie Y, Natsui M, Shibata Y, Hamada K, Yajima N, Kawahara K, Sasaki M, Tsuchiya N, Enomoto K, Mak TW, Nakano T, Habuchi T, Suzuki A, Hyperplasia and Carcinomas in Pten-Deficient Mice and Reduced PTEN Protein in Human Bladder Cancer Patients. <i>Cancer Res.</i> 2006 Sep 1;66(17):8389-96
膀胱癌 Urinary Bladder Cancer	近似模型的表型	MGI:5789953 注：该品系与Stk11-Flox(2)(NM-CKO-200251)和Cyp1a1-cre/ERT工具鼠交配才可能获得预期表型
	参考文献	Shorning BY, Griffiths D, Clarke AR, Lkb1 and Pten synergise to suppress mTOR-mediated tumorigenesis and epithelial-mesenchymal transition in the mouse bladder. <i>PLoS One.</i> 2011;6(1):e16209

膀胱癌 Urinary Bladder Cancer	近似模型的表型	MGI:3844324 注：该品系与P53-Flox(2)(NM-CKO-190067)和Adeno-cre工具鼠交配才可能获得预期表型
	参考文献	Puzio-Kuter AM, Castillo-Martin M, Kinkade CW, Wang X, Shen TH, Matos T, Shen MM, Cordon-Cardo C, Abate-Shen C, Inactivation of p53 and Pten promotes invasive bladder cancer. <i>Genes Dev.</i> 2009 Mar 15;23(6):675-80
肠假性梗阻 Intestinal Pseudo-Obstruction	近似模型的表型	MGI:4882033 注：该品系与Tyr-cre工具鼠交配才可能获得预期表型
	参考文献	Puig I, Champeval D, De Santa Barbara P, Jaubert F, Lyonnet S, Larue L, Deletion of Pten in the mouse enteric nervous system induces ganglioneuromatosis and mimics intestinal pseudoobstruction. <i>J Clin Invest.</i> 2009 Dec;119(12):3586-96
持续性胎儿循环综合征 Persistent Fetal Circulation Syndrome	近似模型的表型	MGI:5503192 注：该品系与Twist2-Cre工具鼠交配才可能获得预期表型
	参考文献	Tiozzo C, Carraro G, Al Alam D, Baptista S, Danopoulos S, Li A, Lavarreda-Pearce M, Li C, De Langhe S, Chan B, Borok Z, Bellusci S, Minoo P, Mesodermal Pten inactivation leads to alveolar capillary dysplasia-like phenotype. <i>J Clin Invest.</i> 2012 Nov 1;122(11):3862-72
大头畸形自闭症综合征 Macrocephaly-Autism Syndrome	近似模型的表型	MGI:5660888 注：该品系与Eno2-cre工具鼠交配才可能获得预期表型
	参考文献	Kwon CH, Luikart BW, Powell CM, Zhou J, Matheny SA, Zhang W, Li Y, Baker SJ, Parada LF, Pten regulates neuronal arborization and social interaction in mice. <i>Neuron.</i> 2006 May 4;50(3):377-88
恶性星形细胞瘤 Malignant Astrocytoma	近似模型的表型	MGI:4840094 注：该品系与Nf1-Flox(NM-CKO-200018), P53-Flox(2)(NM-CKO-190067)和GFAP-cre工具鼠交配才可能获得预期表型
	参考文献	Kwon CH, Zhao D, Chen J, Alcantara S, Li Y, Burns DK, Mason RP, Lee EY, Wu H, Parada LF, Pten haploinsufficiency accelerates formation of high-grade astrocytomas. <i>Cancer Res.</i> 2008 May 1;68(9):3286-94

睾丸颗粒细胞瘤 Testicular Granulosa Cell Tumor	近似模型的表型	MGI:4941746 注：该品系与Ctnnb1-Flox(NM-CKO-200154)和Amhr2-Cre工具鼠交配才可能获得预期表型
	参考文献	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. <i>Carcinogenesis.</i> 2009 May;30(5):869-78
黑色素瘤 Melanoma	近似模型的表型	MGI:4418448 注：该品系与Cdkn2a-Flox(2)(NM-CKO-200151)和Tyr-cre/ERT2工具鼠交配才可能获得预期表型
	参考文献	Held MA, Curley DP, Dankort D, McMahon M, Muthusamy V, Bosenberg MW, Characterization of melanoma cells capable of propagating tumors from a single cell. <i>Cancer Res.</i> 2010 Jan 1;70(1):388-97
黑色素瘤 Melanoma	近似模型的表型	MGI:4418449 注：该品系与Cdkn2a-Flox(2)(NM-CKO-200151), Ctnnb1-Flox(NM-CKO-200154)和Tyr-cre/ERT2工具鼠交配才可能获得预期表型
	参考文献	Held MA, Curley DP, Dankort D, McMahon M, Muthusamy V, Bosenberg MW, Characterization of melanoma cells capable of propagating tumors from a single cell. <i>Cancer Res.</i> 2010 Jan 1;70(1):388-97
甲状腺癌 Thyroid Gland Cancer	近似模型的表型	MGI:5784778 注：该品系与Hras-Flox(NM-CKO-2117376)和TPO-cre工具鼠交配才可能获得预期表型
	参考文献	Garcia-Rendueles ME, Ricarte-Filho JC, Untch BR, Landa I, Knauf JA, Voza F, Smith VE, Ganly I, Taylor BS, Persaud Y, Oler G, Fang Y, Jhanwar SC, Viale A, Heguy A, Huberman KH, Giancotti F, Ghossein R, Fagin JA, NF2 Loss Promotes Oncogenic RAS-Induced Thyroid Cancers via YAP-Dependent Transactivation of RAS Proteins and Sensitizes Them to MEK Inhibition. <i>Cancer Discov.</i> 2015 Nov;5(11):1178-93

甲状腺癌 Thyroid Gland Carcinoma	近似模型的表型	MGI:5897837 注：该品系与P53-Flox(2)(NM-CKO-190067)和TPO-cre工具鼠交配才可能获得预期表型
	参考文献	Antico Arciuch VG, Russo MA, Dima M, Kang KS, Dasrath F, Liao XH, Refetoff S, Montagna C, Di Cristofano A, Thyrocyte-specific inactivation of p53 and Pten results in anaplastic thyroid carcinomas faithfully recapitulating human tumors. <i>Oncotarget.</i> 2011 Dec;2(12):1109-26
甲状腺滤泡癌 Thyroid Gland Follicular Carcinoma	近似模型的表型	MGI:4838317 注：该品系与TPO-cre工具鼠交配才可能获得预期表型
	参考文献	Antico-Arciuch VG, Dima M, Liao XH, Refetoff S, Di Cristofano A, Cross-talk between PI3K and estrogen in the mouse thyroid predisposes to the development of follicular carcinomas with a higher incidence in females. <i>Oncogene.</i> 2010 Oct 21;29(42):5678-86
甲状腺滤泡癌 Thyroid Gland Follicular Carcinoma	近似模型的表型	MGI:5517709 注：该品系与Nkx2-1-cre工具鼠交配才可能获得预期表型
	参考文献	Tiozzo C, Danopoulos S, Lavarreda-Pearce M, Baptista S, Varimezova R, Al Alam D, Warburton D, Rehan V, De Langhe S, Di Cristofano A, Bellusci S, Minoo P, Embryonic epithelial Pten deletion through Nkx2.1-cre leads to thyroid tumorigenesis in a strain-dependent manner. <i>Endocr Relat Cancer.</i> 2012 Apr;19(2):111-22
甲状腺滤泡癌 Thyroid Gland Follicular Carcinoma	近似模型的表型	MGI:5897675 注：该品系与Prkar1a-Flox(NM-CKO-2101183)和TPO-cre工具鼠交配才可能获得预期表型
	参考文献	Pringle DR, Yin Z, Lee AA, Manchanda PK, Yu L, Parlow AF, Jarjoura D, La Perle KM, Kirschner LS, Thyroid-specific ablation of the Carney complex gene, PRKAR1A, results in hyperthyroidism and follicular thyroid cancer. <i>Endocr Relat Cancer.</i> 2012 Jun;19(3):435-46

卵巢癌 Ovarian Cancer	近似模型的表型	MGI:5432226 注：该品系与Ctnnb1-Flox(NM-CKO-200154)和CYP19A1-cre工具鼠交配才可能获得预期表型
	参考文献	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. <i>Oncogene</i> . 2012 Mar 22;31(12):1504-20
卵巢癌 Ovarian Cancer	近似模型的表型	MGI:5432232 注：该品系与Pten-Flox(NM-CKO-18004)和Amhr2-Cre工具鼠交配才可能获得预期表型
	参考文献	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. <i>Oncogene</i> . 2012 Mar 22;31(12):1504-20
卵巢癌 Ovarian Cancer	近似模型的表型	MGI:5704363 注：该品系与Dicer1-Flox(NM-CKO-200158)和Amhr2-Cre工具鼠交配才可能获得预期表型
	参考文献	Kim J, Coffey DM, Creighton CJ, Yu Z, Hawkins SM, Matzuk MM, High-grade serous ovarian cancer arises from fallopian tube in a mouse model. <i>Proc Natl Acad Sci U S A</i> . 2012 Mar 6;109(10):3921-6
卵巢癌 Ovarian Cancer	近似模型的表型	MGI:5704370 注：该品系与Dicer1-Flox(NM-CKO-200158), P53-Flox(2)(NM-CKO-190067)和Amhr2-Cre工具鼠交配才可能获得预期表型
	参考文献	Kim J, Coffey DM, Ma L, Matzuk MM, The ovary is an alternative site of origin for high-grade serous ovarian cancer in mice. <i>Endocrinology</i> . 2015 Jun;156(6):1975-81
卵巢癌 Ovarian Cancer	近似模型的表型	MGI:5704372 注：该品系与P53-Flox(2)(NM-CKO-190067)和Amhr2-Cre工具鼠交配才可能获得预期表型
	参考文献	Kim J, Coffey DM, Ma L, Matzuk MM, The ovary is an alternative site of origin for high-grade serous ovarian cancer in mice. <i>Endocrinology</i> . 2015 Jun;156(6):1975-81

卵巢癌 Ovarian Cancer	近似模型的表型	MGI:5779541 注：该品系与Apc-Flox(NM-CKO-200013)和Ad-Cre工具鼠交配才可能获得预期表型
	参考文献	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. <i>Cancer Cell.</i> 2007 Apr;11(4):321-33
皮肤黑色素瘤 Skin Melanoma	近似模型的表型	MGI:5902132 注：该品系与Braf-Flox(NM-CKO-200073)和Tyr-cre/ERT2工具鼠交配才可能获得预期表型
	参考文献	Dankort D, Curley DP, Cartlidge RA, Nelson B, Karnezis AN, Damsky WE Jr, You MJ, DePinho RA, McMahon M, Bosenberg M, Braf(V600E) cooperates with Pten loss to induce metastatic melanoma. <i>Nat Genet.</i> 2009 May;41(5):544-52
前列腺癌 Prostate Cancer	近似模型的表型	MGI:4358249 注：该品系与Pbsn-cre工具鼠交配才可能获得预期表型
	参考文献	Mulholland DJ, Tran LM, Li Y, Cai H, Morim A, Wang S, Plaisier S, Garraway IP, Huang J, Graeber TG, Wu H, Cell Autonomous Role of PTEN in Regulating Castration-Resistant Prostate Cancer Growth. <i>Cancer Cell.</i> 2011 Jun 14;19(6):792-804
前列腺癌 Prostate Cancer	近似模型的表型	MGI:4420974 注：该品系与Pbsn-cre工具鼠交配才可能获得预期表型
	参考文献	Wang S, Gao J, Lei Q, Rozengurt N, Pritchard C, Jiao J, Thomas GV, Li G, Roy-Burman P, Nelson PS, Liu X, Wu H, Prostate-specific deletion of the murine Pten tumor suppressor gene leads to metastatic prostate cancer. <i>Cancer Cell.</i> 2003 Sep;4(3):209-21

前列腺癌 Prostate Cancer	近似模型的表型	MGI:5009703 注：该品系与Ar-Flox(NM-CKO-00110)和Pbsn-cre工具鼠交配才可能获得预期表型
	参考文献	Mulholland DJ, Tran LM, Li Y, Cai H, Morim A, Wang S, Plaisier S, Garraway IP, Huang J, Graeber TG, Wu H, Cell Autonomous Role of PTEN in Regulating Castration-Resistant Prostate Cancer Growth. <i>Cancer Cell.</i> 2011 Jun 14;19(6):792-804
前列腺癌 Prostate Cancer	近似模型的表型	MGI:5431978 注：该品系与Tert-Flox(NM-CKO-2114953), P53-Flox(2)(NM-CKO-190067)和Pbsn-cre工具鼠交配才可能获得预期表型
	参考文献	Ding Z, Wu CJ, Jaskelioff M, Ivanova E, Kost-Alimova M, Protopopov A, Chu GC, Wang G, Lu X, Labrot ES, Hu J, Wang W, Xiao Y, Zhang H, Zhang J, Zhang J, Gan B, Perry SR, Jiang S, Li L, Horner JW, Wang YA, Chin L, DePinho RA, Telomerase reactivation following telomere dysfunction yields murine prostate tumors with bone metastases. <i>Cell.</i> 2012 Mar 2;148(5):896-907
前列腺癌 Prostate Cancer	近似模型的表型	MGI:5467305 注：该品系与Spry1-Flox(NM-CKO-2100607), Spry2-Flox(NM-CKO-2100890)和Osr1-cre工具鼠交配才可能获得预期表型
	参考文献	Schutzman JL, Martin GR, Sprouty genes function in suppression of prostate tumorigenesis. <i>Proc Natl Acad Sci U S A.</i> 2012 Dec 4;109(49):20023-8
前列腺癌 Prostate Cancer	近似模型的表型	MGI:5543907 注：该品系与Braf-Flox(NM-CKO-200073)和Nkx3-1-Cre工具鼠交配才可能获得预期表型
	参考文献	Wang J, Kobayashi T, Floc'h N, Kinkade CW, Aytes A, Dankort D, Lefebvre C, Mitrofanova A, Cardiff RD, McMahon M, Califano A, Shen MM, Abate-Shen C, B-Raf activation cooperates with PTEN loss to drive c-Myc expression in advanced prostate cancer. <i>Cancer Res.</i> 2012 Sep 15;72(18):4765-76

前列腺癌 Prostate Cancer	近似模型的表型	MGI:5636613 注：该品系与KLK3-cre工具鼠交配才可能获得预期表型
	参考文献	De Velasco MA, Tanaka M, Yamamoto Y, Hatanaka Y, Koike H, Nishio K, Yoshikawa K, Uemura H, Androgen deprivation induces phenotypic plasticity and promotes resistance to molecular targeted therapy in a PTEN-deficient mouse model of prostate cancer. <i>Carcinogenesis</i> . 2014 Sep;35(9):2142-53
前列腺癌 Prostate Cancer	近似模型的表型	MGI:5705321 注：该品系与Kras-LSL-G12D(NM-KI-190003)和Pbsn-cre工具鼠交配才可能获得预期表型
	参考文献	Mulholland DJ, Kobayashi N, Ruscetti M, Zhi A, Tran LM, Huang J, Gleave M, Wu H, Pten loss and RAS/MAPK activation cooperate to promote EMT and metastasis initiated from prostate cancer stem/progenitor cells. <i>Cancer Res.</i> 2012 Apr 1;72(7):1878-89
前列腺癌 Prostate Cancer	近似模型的表型	MGI:5827768 注：该品系与Pbsn-cre工具鼠交配才可能获得预期表型
	参考文献	Su Q, Zhang B, Zhang L, Dang T, Rowley D, Ittmann M, Xin L, Jagged1 upregulation in prostate epithelial cells promotes formation of reactive stroma in the Pten null mouse model for prostate cancer. <i>Oncogene</i> . 2017 Feb 02;36(5):618-627
乳腺癌 Breast Cancer	近似模型的表型	MGI:4839510 注：该品系与Erbb2-Flox(NM-CKO-2100231)和MMTV-cre工具鼠交配才可能获得预期表型
	参考文献	Dourdin N, Schade B, Lesurf R, Hallett M, Munn RJ, Cardiff RD, Muller WJ, Phosphatase and tensin homologue deleted on chromosome 10 deficiency accelerates tumor induction in a mouse model of ErbB-2 mammary tumorigenesis. <i>Cancer Res.</i> 2008 Apr 1;68(7):2122-31

<p>乳腺癌 Breast Cancer</p>	<p>近似模型的表型</p> <p>MGI:5752193</p> <p>注：该品系与P53-Flox(2)(NM-CKO-190067)和MMTV-cre工具鼠交配才可能获得预期表型</p> <p>参考文献</p> <p>Liu JC, Voisin V, Wang S, Wang DY, Jones RA, Datti A, Uehling D, Al-awar R, Egan SE, Bader GD, Tsao M, Mak TW, Zackenhaus E, Combined deletion of Pten and p53 in mammary epithelium accelerates triple-negative breast cancer with dependency on eEF2K. EMBO Mol Med. 2014 Dec;6(12):1542-60</p>
<p>乳腺癌 Breast Cancer</p>	<p>近似模型的表型</p> <p>MGI:5752196</p> <p>注：该品系与P53-Flox(2)(NM-CKO-190067)和Wap-cre工具鼠交配才可能获得预期表型</p> <p>参考文献</p> <p>Liu JC, Voisin V, Wang S, Wang DY, Jones RA, Datti A, Uehling D, Al-awar R, Egan SE, Bader GD, Tsao M, Mak TW, Zackenhaus E, Combined deletion of Pten and p53 in mammary epithelium accelerates triple-negative breast cancer with dependency on eEF2K. EMBO Mol Med. 2014 Dec;6(12):1542-60</p>
<p>神经纤维瘤病 Neurofibromatosis</p>	<p>近似模型的表型</p> <p>MGI:4849441</p> <p>注：该品系与Kras-LSL-G12D(NM-KI-190003)和Gfap-cre工具鼠交配才可能获得预期表型</p> <p>参考文献</p> <p>Gregorian C, Nakashima J, Dry SM, Nghiempuh PL, Smith KB, Ao Y, Dang J, Lawson G, Mellinghoff IK, Mischel PS, Phelps M, Parada LF, Liu X, Sofroniew MV, Eilber FC, Wu H, PTEN dosage is essential for neurofibroma development and malignant transformation. Proc Natl Acad Sci U S A. 2009 Nov 17;106(46):19479-84</p>
<p>嗜铬细胞瘤 Pheochromocytoma</p>	<p>近似模型的表型</p> <p>MGI:5812676</p> <p>注：该品系与Sdhb-Flox(NM-CKO-2102409)和KLK3-cre工具鼠交配才可能获得预期表型</p> <p>参考文献</p> <p>Lepoutre-Lussey C, Thibault C, Buffet A, Morin A, Badoual C, Benit P, Rustin P, Ottolenghi C, Janin M, Castro-Vega LJ, Trapman J, Gimenez-Roqueplo AP, Favier J, From Nf1 to Sdhb knockout: Successes and failures in the quest for animal models of pheochromocytoma. Mol Cell Endocrinol. 2016 Feb 5;421:40-8</p>

髓母细胞瘤 Medulloblastoma	<p>近似模型的表型</p> <p>MGI:5825466 注：该品系与P53-Flox(2)(NM-CKO-190067)和Nes-cre/ERT2工具鼠交配才可能获得预期表型</p> <p>参考文献</p> <p>Zhu G, Rankin SL, Larson JD, Zhu X, Chow LM, Qu C, Zhang J, Ellison DW, Baker SJ, PTEN Signaling in the Postnatal Perivascular Progenitor Niche Drives Medulloblastoma Formation. <i>Cancer Res.</i> 2017 Jan 01;77(1):123-133</p>
头颈部鳞状细胞癌 Head And Neck Squamous Cell Carcinoma	<p>近似模型的表型</p> <p>MGI:5487550 注：该品系与Tgfbr1-Flox(NM-CKO-200142)和KRT14-cre/ERT工具鼠交配才可能获得预期表型</p> <p>参考文献</p> <p>Sun ZJ, Zhang L, Hall B, Bian Y, Gutkind JS, Kulkarni AB, Chemopreventive and chemotherapeutic actions of mTOR inhibitor in genetically defined head and neck squamous cell carcinoma mouse model. <i>Clin Cancer Res.</i> 2012 Oct 1;18(19):5304-13</p>
胰腺癌 Pancreatic Carcinoma	<p>近似模型的表型</p> <p>MGI:5013917 注：该品系与Kras-LSL-G12D(NM-KI-190003)和Pdx1-cre工具鼠交配才可能获得预期表型</p> <p>参考文献</p> <p>Hill R, Calvopina JH, Kim C, Wang Y, Dawson DW, Donahue TR, Dry S, Wu H, PTEN loss accelerates KrasG12D-induced pancreatic cancer development. <i>Cancer Res.</i> 2010 Sep 15;70(18):7114-24</p>
幼年型粒单核细胞白血病 Juvenile Myelomonocytic Leukemia	<p>近似模型的表型</p> <p>MGI:5787929 注：该品系与Nf1-Flox(NM-CKO-200018)和Mx1-cre工具鼠交配才可能获得预期表型</p> <p>参考文献</p> <p>Liu YL, Yan Y, Webster C, Shao L, Lensing SY, Ni H, Feng W, Colorado N, Pathak R, Xiang Z, Hauer-Jensen M, Li S, Zhou D, Emanuel PD, Timing of the loss of Pten protein determines disease severity in a mouse model of myeloid malignancy. <i>Blood.</i> 2016 Apr 14;127(15):1912-22</p>
子宫内膜癌 Endometrial Cancer	<p>近似模型的表型</p> <p>MGI:3813633 注：该品系与Pgr-Cre工具鼠交配才可能获得预期表型</p> <p>参考文献</p> <p>Daikoku T, Hirota Y, Tranguch S, Joshi AR, DeMayo FJ, Lydon JP, Ellenson LH, Dey SK, Conditional loss of uterine Pten unfailingly and rapidly induces endometrial cancer in mice. <i>Cancer Res.</i> 2008 Jul 15;68(14):5619-27</p>

子宫内膜癌 Endometrial Cancer	<p>近似模型的表型 MGI:4944273 注：该品系与Errfi1-Flox(NM-CKO-2101042)和Pgr-Cre工具鼠交配才可能获得预期表型</p> <p>参考文献 Kim TH, Franco HL, Jung SY, Qin J, Broaddus RR, Lydon JP, Jeong JW, The synergistic effect of Mig-6 and Pten ablation on endometrial cancer development and progression. <i>Oncogene</i>. 2010 Jul 1;29(26):3770-80</p>
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验证数据

暂无数据

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[Nuclear DEK preserves hematopoietic stem cells potential via NCoR1/HDAC3-Akt1/2-mTOR axis](#)

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