Product datasheet for KN309147

Lats1 Mouse Gene Knockout Kit (CRISPR)

Product data:

Product Type:	Knockout Kits (CRISPR)
Format:	2 gRNA vectors, 1 GFP-puro donor, 1 scramble control
Donor DNA:	GFP-puro
Symbol:	Lats1
Locus ID:	16798
Components:	**KN309147G1**, Lats1 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: AGAGGGGTGAAAAGCCAGAA
	KN309147G2, Lats1 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: AGGAGATCCGAGAATCCCTG
	KN309147D, donor DNA containing left and right homologous arms and GFP-puro functional cassette.

Homologous arm and GFP-puro sequences:

pUC vector backbone in gray; Left arm sequence in blue; GFP-puro in green; Right arm in violet

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CACTTAGTAT CCTTTATGAT TGTATAAGCC TTACTTTCTG AAGCAGTTAG AAGGTTTGTT TGTTTGTTTG
TTTATTTATT TATTTGTCAC AAATGCTGCT AGTTAGAAAT ATTGTTTTTT GGGTTTGGGT TTTTTTTTTT
TTTTTTTCCC CGAGACAGGG TTTCTCTGTG TAGCTCTGGC TGTCCTGGGA CTCACTCTGT AGACCAGGCT
GGCCTCAAAC TCAGAAATCC GCCTGCCTCT GCCTCCCAAG TGCTGAGATT AAAGGAATGC ACCACCACTG
TCCGGCTAGA AATATTGTAA ATCCACTTTA GAAACTAGGA AATTGGCACA GAGAGGTGTA GTAACTTACC
TTGATCCTAC AGTACTATGT CATGAAGTCT GAGCAAGCAA CTCCCATAGC AGTGGGGGTT TCCCCTAATA
CAACGAACTG CTTCATTAAT AACTCTAGCT GTGTATTTTC TTTCCTAGGT TAGTTACTTC CACTGTAAAG
GATTTTAACA TTCCTGGGAC TTCCCCTTTC ACCTTGGCTC AGAAGAAGCT CTGAGTCTTT GAGTTAGCTC
CTTAAGAAGT GCTTTGCAGG GGCCACATAT AGATGCTTTC AAGGCCGAGC ATAACCTGAA TAAGATGTCG
ACTGAAGATC CCAGGCAGGT GAGAAATCCA CCCAAATTTG GCACACATCA TAAAGCCTTG CAAGAAATTC
GAAACTCTCT ACTACCATTT GCAAATGAAA CAAGTTCTTC CCGGAGCCCT TCAGAAGTTA ATCCACAGAT
GTTTCAGGAT TTGCAGGCTG CTGGCTTTGA TGAGGTAAGA ACTTTTAAAA ACAAAAATAA AAGCAAACAA
ACAAACACCA TCACAAATGG TTTTTCTTAT TCTGTGAGGC AAACAAGTTC AAGGGGAGCT CATAAGGGCG
TTTCTTTTGA GAGGACTTAC CTGTACATTT AAGTTTGTGT GTTCCATTAA CAGAGAATAC TACCACAGTA
ATACTCTTAC TAACTAGTAT GACAGAATGA TTGTTATTGC CTTAGTTTCT TCTGTGCTAT CCCCAAAGCC
TGGAGTTTCT GTTGGTGAGG TCATGAAACC AGAGTGGAGA TGCAGTTGAG GGAGGCTGCA AGTGAGGATG
GACGGGCTTG GTCGCAGCCT GAGATATAGA CACTGATCTC AGCTGGTGTT GAGAGTGAGA GTGCCATGGC
TGTGAAGTCT
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GE100003, scramble sequence in pCas-Guide vector

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Disclaimer:	These products are manufactured and supplied by OriGene under license from ERS. The kit is designed based on the best knowledge of CRISPR technology. The system has been functionally validated for knocking-in the cassette downstream the native promoter. The efficiency of the knock-out varies due to the nature of the biology and the complexity of the experimental process.
RefSeq:	NM_010690
UniProt ID:	Q8BYR2
Synonyms:	AW208599
Summary:	Negative regulator of YAP1 in the Hippo signaling pathway that plays a pivotal role in organ size control and tumor suppression by restricting proliferation and promoting apoptosis. The core of this pathway is composed of a kinase cascade wherein STK3/MST2 and STK4/MST1, in complex with its regulatory protein SAV1, phosphorylates and activates LATS1/2 in complex with its regulatory protein MOB1, which in turn phosphorylates and inactivates YAP1 oncoprotein and WWTR1/TAZ. Phosphorylation of YAP1 by LATS1 inhibits its translocation into the nucleus to regulate cellular genes important for cell proliferation, cell death, and cell migration. Acts as a tumor suppressor which plays a critical role in maintenance of ploidy through its actions in both mitotic progression and the G1 tetraploidy checkpoint. Negatively regulates G2/M transition by down-regulating CDK1 kinase activity. Involved in the control of p53 expression. Affects cytokinesis by regulating actin polymerization through negative modulation of LIMK1. May also play a role in endocrine function. Plays a role in mammary gland epithelial cells differentiation, both through the Hippo signaling pathway and the intracellular estrogen receptor signaling pathway by promoting the degradation of ESR1. [UniProtKB/Swiss-Prot Function]

Product images:

Target gene knocked out, GFP under native gene promoter, Puro under PGK promoter