

## Product datasheet for **KN309148RB**

### Lats2 Mouse Gene Knockout Kit (CRISPR)

#### Product data:

Product Type:	Knockout Kits (CRISPR)
Format:	2 gRNA vectors, 1 RFP-BSD donor, 1 scramble control
Donor DNA:	RFP-BSD
Symbol:	Lats2
Locus ID:	50523
Components:	<p><b>KN309148G1</b>, Lats2 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: GATTGCAAGAGATTCGAGAG</p> <p><b>KN309148G2</b>, Lats2 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: CATCCAAGGCTTCCACCCAG</p> <p><b>KN309148RBD</b>, donor DNA containing left and right homologous arms and RFP-BSD functional cassette.</p>

Homologous arm and RFP-BSD sequences:

pUC vector backbone in gray; Left arm sequence in blue; RFP-BSD in green; Right arm in violet

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CTCAGGTGGG TGAATATGTT AGGTAAAGCC TCAGGCTTAG GGACAGTGGT GTGAATCAGG AATTGGTTGA
TATTAGGGAC AAGCCAGAAA TTTACTGGGT ATGTTTAAAC CTAAATCCCC AAGCTGTGGT TTCCAGAATT
ACATGATAGT GAGTTGTTGA GACGCCCGCC GTTGCCCTGG GTGGTGGTTG TGGAGACACT TGGCTGTAGG
CTTCCTGTTA AAGGGACCTT CCTGGGACAG CTCCAGAGCC AAGTAGCCCA TGACACTTCT GAAAGCCATA
TACTTTTTCT TTA CTCTCTA GCTGGAATAT TTCCAAAATC ACCATGCGTT TCTGAAAAGT AGCTTTAACA
TTATGTGAAA TCCAAAAATA ACCACTTTTG TCCCATTTC TTTTTCAGAG AGTGATGGTC TTCAAAATGA
AAACTCTGGA AAATTTTAGG TTCTCTTAG GAACTACAAA AATTGAAGGA CAGCAATTTT TTGAAAGGAA
GTTGTTCTGA AAGCATGTTT ACAATTCACT GACACTGTTG ACTGTTCTCT TTAATAAAT AAGACGCTTT
GAGAAGATTG TATTTATGGT AAAAGGAAAC TGGACTAACA GACCAAACAG TGACACTTCC CTGGATGCCA
AAGTCCTGGG GAGCAAAGAT GCCTCCAGGC AGCAGCAAAT GAGAGCCACC CCGAAGTTTG GACCTTATCA
AAAAGCTCTC AGGGAAATCC GATATTCCTT CCTGCCTTTT GCCAACGAGT CAGGCACTTC GGCAGCTGCA
GAGGTGAACC GGCAGATGCT TCAGGAGTTG GTGAATGCGG GATGTGACCA GGTGGGTCCA GGTGCCAGCG
CCCTTCAGCA GCTCTGGGCA AGCTCTGAAC TCTTCTCACA CTGCCCTTTT CTGTATCCCT TAGCCAGTGG
CTGCCTTCTC TCCAAGGTC TTAGGCATT TTCTTCTTG AAATTGTTC TTGCTGCTT TTCATTATT
CTGCTGTGTG TGTGTGTGTG TGTGTGTGTG TGTGTGTGTC TAGAACCCAG GGTCTGTGC ATTTGAAGCA
CACGCTTCTC TGCTCAGCTG TGCTGCTTC CAGTTCTATT CTTAGCGCTC TCCTTGGGAC CTGCTTGGGA
TTATTCCGAG CTTCTGTGGA CAAGAGACTG GCTTCTCTTA CCTTGTTTT GGTGTGTATT TTCATTCTC
TCCTGAACGA

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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\\_015771](#), [NM\\_153382](#)

**UniProt ID:** [Q7TSJ6](#)

**Synonyms:** 4932411G09Rik; AV277261; AW228608

**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 LATS2 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 centrosome duplication, maintenance of mitotic fidelity and genomic stability. Negatively regulates G1/S transition by down-regulating cyclin E/CDK2 kinase activity. Negative regulator of the androgen receptor. Phosphorylates SNAI1 in the nucleus leading to its nuclear retention and stabilization, which enhances its epithelial-mesenchymal transition and tumor cell invasion/migration activities. This tumor-promoting activity is independent of its effects upon YAP1 or WWTR1/TAZ (By similarity).[UniProtKB/Swiss-Prot Function]

### Product images:

