

Product datasheet for **KN309147BN**

Lats1 Mouse Gene Knockout Kit (CRISPR)

Product data:

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| Product Type: | Knockout Kits (CRISPR) |
| Format: | 2 gRNA vectors, 1 mBFP-Neo donor, 1 scramble control |
| Donor DNA: | mBFP-Neo |
| Symbol: | Lats1 |
| Locus ID: | 16798 |
| Components: | KN309147G1 , Lats1 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002) KN309147G2 , Lats1 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002) KN309147BND , donor DNA containing left and right homologous arms and mBFP-Neo functional cassette. GE100003 , scramble sequence in pCas-Guide vector |
| 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 |



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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:
