

# Product datasheet for KN309772LP

## Mapk9 Mouse Gene Knockout Kit (CRISPR)

## **Product data:**

#### OriGene Technologies, Inc.

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Product Type:Nitockout Kis (CKISPR)Format:2 gRNA vectors, 1 Luciferase-Puro donor, 1 scramble controlDonor DNA:Luciferase-PuroSymbol:Mapk9Locus ID:26420Components:KN309772G1, Mapk9 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002) KN309772G2, Mapk9 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002) KN309772LPD, donor DNA containing left and right homologous arms and Luciferase-Puro functional cassette.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 001163671, NM 001163672, NM 016961, NM 207692UniProt ID:O9WTUGSynonyms:Al851083; JINK2; p54aSAPK; Prkm9	Broduct Typo:	Knockout Kite (CRISPR)
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<ul> <li>KN309772G2, Mapk9 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002)</li> <li>KN309772LPD, donor DNA containing left and right homologous arms and Luciferase-Puro functional cassette.</li> <li>GE100003, scramble sequence in pCas-Guide vector</li> <li>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.</li> <li>RefSeq: NM 001163671, NM 001163672, NM 016961, NM 207692</li> <li>UniProt ID: Q9WTU6</li> </ul>	Locus ID:	26420
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Synonyms: Al851083; JNK2; p54aSAPK; Prkm9	UniProt ID:	<u>Q9WTU6</u>
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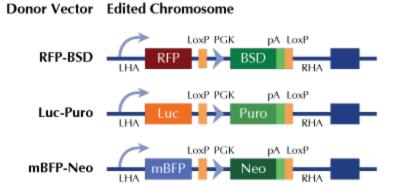


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#### Sourigene Mapk9 Mouse Gene Knockout Kit (CRISPR) – KN309772LP

Serine/threonine-protein kinase involved in various processes such as cell proliferation, Summary: differentiation, migration, transformation and programmed cell death. Extracellular stimuli such as proinflammatory cytokines or physical stress stimulate the stress-activated protein kinase/c-Jun N-terminal kinase (SAP/JNK) signaling pathway. In this cascade, two dual specificity kinases MAP2K4/MKK4 and MAP2K7/MKK7 phosphorylate and activate MAPK9/JNK2. In turn, MAPK9/JNK2 phosphorylates a number of transcription factors, primarily components of AP-1 such as JUN and ATF2 and thus regulates AP-1 transcriptional activity. In response to oxidative or ribotoxic stresses, inhibits rRNA synthesis by phosphorylating and inactivating the RNA polymerase 1-specific transcription initiation factor RRN3. Promotes stressed cell apoptosis by phosphorylating key regulatory factors including TP53 and YAP1. In T-cells, MAPK8 and MAPK9 are required for polarized differentiation of Thelper cells into Th1 cells. Upon T-cell receptor (TCR) stimulation, is activated by CARMA1, BCL10, MAP2K7 and MAP3K7/TAK1 to regulate JUN protein levels. Plays an important role in the osmotic stress-induced epithelial tight-junctions disruption. When activated, promotes beta-catenin/CTNNB1 degradation and inhibits the canonical Wnt signaling pathway. Participates also in neurite growth in spiral ganglion neurons. Phosphorylates the CLOCK-ARNTL/BMAL1 heterodimer and plays a role in the regulation of the circadian clock (PubMed:22441692). Phosphorylates POU5F1, which results in the inhibition of POU5F1's transcriptional activity and enhances its proteosomal degradation (PubMed:29153991). [UniProtKB/Swiss-Prot Function]

### **Product images:**



RFP, Luc, and mBFP will be under native gene promoter

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