

Product datasheet for KN309725LP

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Map2k7 Mouse Gene Knockout Kit (CRISPR)

Product data:

Product Type: Knockout Kits (CRISPR)

Format: 2 gRNA vectors, 1 Luciferase-Puro donor, 1 scramble control

Donor DNA: Luciferase-Puro

Symbol: Map2k7 Locus ID: 26400

Components: KN309725G1, Map2k7 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002)

KN309725G2, Map2k7 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002)

KN309725LPD, donor DNA containing left and right homologous arms and Luciferase-Puro

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 001042557, NM 001164172, NM 001291777, NM 001291778, NM 001291783,

NM 011944

UniProt ID: Q8CE90

Synonyms: 5930412N11Rik; JNKK 2; Jnkk2; MAPKK 7; Mapkk7; MEK 7; Mek7; Mkk7; Prkmk7; sek2

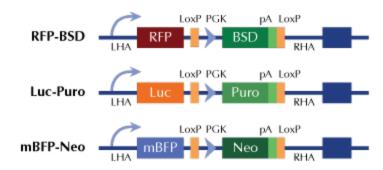


Summary:

Dual specificity protein kinase which acts as an essential component of the MAP kinase signal transduction pathway. Essential component of the stress-activated protein kinase/c-Jun Nterminal kinase (SAP/JNK) signaling pathway. With MAP2K4/MKK4, is the one of the only known kinase to directly activate the stress-activated protein kinase/c-Jun N-terminal kinases MAPK8/JNK1, MAPK9/JNK2 and MAPK10/JNK3. MAP2K4/MKK4 and MAP2K7/MKK7 both activate the JNKs by phosphorylation, but they differ in their preference for the phosphorylation site in the Thr-Pro-Tyr motif. MAP2K4/MKK4 shows preference for phosphorylation of the Tyr residue and MAP2K7/MKK7 for the Thr residue. The monophosphorylation of JNKs on the Thr residue is sufficient to increase JNK activity indicating that MAP2K7/MKK7 is important to trigger JNK activity, while the additional phosphorylation of the Tyr residue by MAP2K4/MKK4 ensures optimal JNK activation. Has a specific role in JNK signal transduction pathway activated by proinflammatory cytokines. The MKK/JNK signaling pathway is also involved in mitochondrial death signaling pathway, including the release cytochrome c, leading to apoptosis. Part of a non-canonical MAPK signaling pathway, composed of the upstream MAP3K12 kinase and downstream MAP kinases MAPK1/ERK2 and MAPK3/ERK1, that enhances the AP-1-mediated transcription of APP in response to APOE (PubMed:28111074).[UniProtKB/Swiss-Prot Function]

Product images:

Donor Vector Edited Chromosome



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