

Recombinant Mouse Map2k7 Protein, Myc/DDK-tagged

Cat. No. Map2k7-3925M Lot. No. (See product label)

SPECIFICATION

Product Overview Purified recombinant protein of mouse full-length mitogen-activated protein kinase kinase 7 (Map2k7), with C-terminal MYC/DDK tag, expressed in HEK293T cells.

Species Mouse


Source HEK293

Description

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 N-terminal 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

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transcription of APP in response to APOE.

Molecular Mass	52.9 kDa
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade after receiving vials.
Concentration	>50 µg/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

GENE INFORMATION

Gene Name	Map2k7 mitogen-activated protein kinase kinase 7 [<i>Mus musculus</i> (house mouse)]
Official Symbol	Map2k7
Synonyms	MAP2K7; mitogen-activated protein kinase kinase 7; dual specificity mitogen-activated protein kinase kinase 7; MEK 7; JNKK 2; MAPKK 7; JNK kinase 2; MAPK/ERK kinase 7; MAP kinase kinase 7; JNK-activating kinase 2; c-Jun N-terminal kinase kinase 2; mitogen activated protein kinase kinase 7; protein kinase, mitogen activated, kinase 7; MKK7; sek2; Jnkk2; Prkmk7; 5930412N11Rik
Gene ID	26400
mRNA Refseq	NM_001042557

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Protein Refseq NP_001036022

UniProt ID Q8CE90

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