

Recombinant Mouse Map2k4 Protein, Myc/DDK-tagged

Cat. No. Map2k4-3923M Lot. No. (See product label)

SPECIFICATION

Product Overview Purified recombinant protein of mouse full-length mitogen activated protein kinase kinase 4 (cDNA clone MGC:36532 IMAGE:3962163), complete cds, 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 MAP2K7/MKK7, 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 shows preference for phosphorylation of the Tyr residue and MAP2K7/MKK7 for the Thr residue. The phosphorylation of the Thr residue by MAP2K7/MKK7 seems to be the prerequisite for JNK activation at least in response to proinflammatory cytokines, while other stimuli activate both MAP2K4/MKK4 and MAP2K7/MKK7 which synergistically phosphorylate JNKs. MAP2K4 is required for maintaining peripheral lymphoid homeostasis. The MKK/JNK signaling pathway is also involved in mitochondrial death signaling pathway, including the release cytochrome c, leading to apoptosis. Whereas MAP2K7/MKK7 exclusively activates JNKs, MAP2K4/MKK4 additionally activates the p38 MAPKs MAPK11, MAPK12,

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	MAPK13 and MAPK14.
Molecular Mass	32.2 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	Map2k4 mitogen-activated protein kinase kinase 4 [<i>Mus musculus</i> (house mouse)]
Official Symbol	Map2k4
Synonyms	Map2k4; mitogen-activated protein kinase kinase 4; Sek; Ser; JNKK; MEK4; MKK4; Sek1; JNKK1; Serk1; PRKMK4; MAPKK 4; dual specificity mitogen-activated protein kinase kinase 4; C-JUN N-terminal kinase kinase 1; JNK kinase 1; JNK-activating kinase 1; MAP kinase kinase 4; MAPK/ERK kinase 4; SAPK/ERK kinase 1; SAPK/Erk/kinase 1; mitogen activated protein kinase kinase 4, variant 1; EC 2.7.12.2
Gene ID	26398
mRNA Refseq	NM_009157

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Protein Refseq NP_033183

UniProt ID P47809

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