

## Recombinant Mouse Map2k4 Protein, Myc/DDK-tagged

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

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| <b>Product Overview</b> | 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Species</b>          | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Source</b>           | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Description</b>      | 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.                                                                                                                            |
| <b>Molecular Mass</b> | 32.2 kDa                                                                                                                                      |
| <b>Purity</b>         | > 80% as determined by SDS-PAGE and Coomassie blue staining                                                                                   |
| <b>Stability</b>      | Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles. |
| <b>Storage</b>        | Store at -80 centigrade after receiving vials.                                                                                                |
| <b>Concentration</b>  | >50 µg/mL as determined by microplate BCA method                                                                                              |
| <b>Storage Buffer</b> | 25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.                                                                                         |

## GENE INFORMATION

|                        |                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | Map2k4 mitogen-activated protein kinase kinase 4 [ Mus musculus (house mouse) ]                                                                                                                                                                                                                                                                                                                          |
| <b>Official Symbol</b> | Map2k4                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Synonyms</b>        | 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 |
| <b>Gene ID</b>         | 26398                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>mRNA Refseq</b>     | NM_009157                                                                                                                                                                                                                                                                                                                                                                                                |

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| Protein Refseq | NP_033183 |
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|            |        |
|------------|--------|
| UniProt ID | P47809 |
|------------|--------|

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