

## Recombinant Mouse Map2k7 Protein, Myc/DDK-tagged

**Cat. No.** Map2k7-3925M    **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 7 (Map2k7), with C-terminal MYC/DDK tag, expressed in HEK293T cells.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Species</b>          | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Source</b>           | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Description</b>      | <p>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</p> |

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|                       |                                                                                                                                               |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
|                       | transcription of APP in response to APOE.                                                                                                     |
| <b>Molecular Mass</b> | 52.9 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>       | Map2k7 mitogen-activated protein kinase kinase 7 [ Mus musculus (house mouse) ]                                                                                                                                                                                                                                                                                                          |
| <b>Official Symbol</b> | Map2k7                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Synonyms</b>        | 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 |
| <b>Gene ID</b>         | 26400                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>mRNA Refseq</b>     | NM_001042557                                                                                                                                                                                                                                                                                                                                                                             |

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| Protein Refseq | NP_001036022 |
|----------------|--------------|

|            |        |
|------------|--------|
| UniProt ID | Q8CE90 |
|------------|--------|

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