

Recombinant Mouse MP2K6 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51494

Size: 10ug, 100ug

Protein Name: Dual specificity mitogen-activated protein kinase kinase 6 (MAP kinase kinase 6) (MAPKK 6) (EC 2.7.12.2) (MAPK/ERK kinase 6) (MEK 6) (SAPKK3)

Synonym: Map2k6, Prkmk6, Sapkk3

UniProt ID: P70236

UniProt Link: www.uniprot.org/uniprotkb/P70236/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 334 AA

Molecular Weight: 37 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MSQSKGKKRNPGLKIPKEAFEQPQTSSSTPPRDLDKACISIGNQNFEVKADDLEPIVELGRGAYGVV
EKMRHVPSGQIMAVKRIRATVNSQEQKRLLMDLDVSMRTVDCPFTVTFYGFALFREGDVWICMELMD
TSLDKFYKQVIDKGQTIPEDILGKIAVSIVKALEHLHSLSVIHRDVKPSNVLINTLGQVKMCDFGISGYL
VDSVAKTIDAGCKPYMAPERINPELNQKGYSVKSDIWSLGITMIELAILRFPYDSWGTTPFQQLKQVVE
EPSPQLPADKFSAADFVDFTSQCLKKNKERPTYPELMQHPFFTVHESKAADVASFVKLILGD

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Dual specificity mitogen-activated protein kinase kinase 6 (MAP kinase kinase 6) (MAPKK 6) (EC 2.7.12.2) (MAPK/ERK kinase 6) (MEK 6) (SAPKK3) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Dual specificity protein kinase which acts as an essential component of the MAP kinase signal transduction pathway. With MAP3K3/MKK3, catalyzes the concomitant phosphorylation of a threonine and a tyrosine residue in the MAP kinases p38 MAPK11, MAPK12, MAPK13 and MAPK14 and plays an important role in the regulation of cellular responses to cytokines and all kinds of stresses. Especially, MAP2K3/MKK3 and MAP2K6/MKK6 are both essential for the activation of MAPK11 and MAPK13 induced by environmental stress, whereas MAP2K6/MKK6 is the major MAPK11 activator in response to TNF. MAP2K6/MKK6 also phosphorylates and activates PAK6. The p38 MAP kinase signal transduction pathway leads to direct activation of transcription factors. Nuclear targets of p38 MAP kinase include the transcription factors ATF2 and ELK1. Within the p38 MAPK signal transduction pathway, MAP3K6/MKK6 mediates phosphorylation of STAT4 through MAPK14 activation, and is therefore required for STAT4 activation and STAT4-regulated gene expression in response to IL-12 stimulation. The pathway is also crucial for IL-6-induced SOCS3 expression and down-regulation of IL-6-mediated gene induction; and for IFNG-dependent gene transcription. Has a role in osteoclast differentiation through NF-kappa-B transactivation by TNFSF11, and in endochondral ossification and since SOX9 is another likely downstream target of the p38 MAPK pathway. MAP2K6/MKK6 mediates apoptotic cell death in thymocytes. Acts also as a regulator for melanocytes dendricity, through the modulation of Rho family GTPases.

Subcellular Localization: Nucleus . Cytoplasm . Cytoplasm, cytoskeleton . Note= Binds to microtubules.

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.