

MAP2K6 Protein, Human (Baculovirus, His)

Cat. No.:	HY-P700592
Synonyms:	MAP2K6; mitogen-activated protein kinase kinase 6; MEK6; MKK6; MAPKK6; PRKMK6; SAPKK3; protein kinase, mitogen-activated, kinase 6 (MAP kinase kinase 6); EC 2.7.12.2; Dual specificity mitogen-activated protein kinase kinase 6; MAP kinase kinase 6; MAPK/ERK kinase 6
Species:	Human
Source:	Sf9 insect cells
Accession:	P52564 (M1-D334)
Gene ID:	5608
Molecular Weight:	39.5 kDa

PROPERTIES

AA Sequence

MSQSKGK KRN	PGLKIPKEAF	EQPQTSSTPP	RDLDSKACIS
IGNQNF EVKA	DDLEPIMELG	RGAYGVVEKM	RHVPSGQIMA
VKRIRATVNS	QEQKRL LMDL	DISMRTVDCP	FTVTFYGALF
REGDVWICME	LMDTSLDKFY	KQVIDKGQTI	PEDILGKIAV
SIVKALEHLH	SKLSVIHRDV	KPSNVLINAL	GQVKMCDFGI
SGYLVDSVAK	TIDAGCKPYM	APERINPELN	QKGYSVKSDI
WSLGITMIEL	AILRFPYDSW	GTPFQQLKQV	VEEPSPLPA
DKFSAEFVDF	TSQCLKKNSK	ERPTYPELMQ	HPFFTLHESK
GTDVASFVKL	ILGD		

Biological Activity The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.

Appearance Lyophilized powder.

Formulation Lyophilized from a 0.2 µm filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.

Endotoxin Level <1 EU/µg, determined by LAL method.

Reconstitution It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH₂O.

Storage & Stability Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

Shipping Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background MKK6, a dual specificity protein kinase, serves as an integral component of the MAP kinase signal transduction pathway. In collaboration with MAP3K3/MKK3, MKK6 catalyzes the simultaneous phosphorylation of a threonine and a tyrosine residue

in the MAP kinases p38 MAPK11, MAPK12, MAPK13, and MAPK14, playing a pivotal role in regulating cellular responses to cytokines and various stress stimuli. Both MKK3 and MKK6 are essential for activating MAPK11 and MAPK13 in response to environmental stress, with MKK6 emerging as the principal activator of MAPK11 upon TNF stimulation. Additionally, MKK6 phosphorylates and activates PAK6. The downstream effects of the p38 MAP kinase signal transduction pathway include the direct activation of transcription factors such as ATF2 and ELK1. Within this pathway, MKK6 mediates the phosphorylation of STAT4 through MAPK14 activation, leading to the activation of STAT4 and its regulation of gene expression in response to IL-12 stimulation. Furthermore, the pathway is crucial for IL-6-induced SOCS3 expression and down-regulation of IL-6-mediated gene induction, as well as IFNG-dependent gene transcription. MKK6 plays a role in osteoclast differentiation through NF-kappa-B transactivation by TNFSF11, contributes to endochondral ossification, and likely influences SOX9 as a downstream target of the p38 MAPK pathway. Moreover, MKK6 is involved in mediating apoptotic cell death in thymocytes and serves as a regulator for melanocyte dendricity by modulating Rho family GTPases.

Caution: Product has not been fully validated for medical applications. For research use only.

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