

## Recombinant human biotinylated MAP2K6, His-tagged

Cat. No. MAP2K6-34H Lot. No. (See product label)

### SPECIFICATION

**Product Overview** Recombinant human biotinylated MAP2K6, N-terminally fused to HIS6, was expressed in E.coli. Biotinylated protein is not phosphorylated and activated by MKKs. It is suitable as substrate for kinase activity assays and for western blot analyses.

**Species** Human

**Source** E.coli

**Description** MKK6 is a dual specificity kinase belonging to the group of MAP kinase kinase (MKKs). MKKs are one part of three-kinase phosphorelay system "MAPK cascade" that converts extra cellular stimuli into various cellular responses such as gene expression, mitosis, and differentiation, proliferation, and cell survival/apoptosis. Upon phosphorylation by MKKs (e.g. MLKs, ASK1, TAK1) MKK6 is activated and able to phosphorylate the Thr–Gly–Tyr motif in the activation loop of p38 $\alpha$ , p38 $\beta$ , p38 $\gamma$  and p38 $\delta$ . MKK6, a closely related MKK serves also as activator of p38 MAPK. The activation of the p38MAPKs by one or more MKK is stimulus-specific and cell specific. Whereas MKK3 seems to be the major activator of p38 in mesangial cells, MKK6 appears to be the predominant isoform in thymocytes. In contrast, both kinases are needed for full p38 $\alpha$  activation in response to stimulation by TNF $\alpha$ . Upon UV irradiation, p38 $\alpha$  is activated by MKK3, MKK6 and MKK4, which has also a minor contribution for p38 $\alpha$  activity. Upon UV irradiation, p38 $\alpha$  is activated by MKK3, MKK6 and MKK4, which triggers the stress-activated protein kinases, JNK and has also a minor contribution p38 $\alpha$  activity. Whereas MKK6 can phosphorylate all four p38

 Tel: 1-631-559-9269 1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

MAPK family members, MKK3 activates p38 $\alpha$ , p38 $\gamma$  and p38 $\delta$ , but not p38 $\beta$ .

**Form** 20 mM Tris-HCl, 150 mM NaCl, 1 mM DTT, 20 % glycerol, pH 8.0.

**Molecular Mass** 38.9 kDa

**Purity** >90% by SDS PAGE

**Storage** - 80°C (avoid repeated freeze-thaw cycles !)

**Concentration** 0.47 mg/ml (Bradford with BSA as standard)

**Conjugation** Biotin

## GENE INFORMATION

**Gene Name** [MAP2K6 mitogen-activated protein kinase kinase 6 \[ Homo sapiens \]](#)

**Official Symbol** MAP2K6

**Synonyms** MAP2K6; mitogen-activated protein kinase kinase 6; PRKMK6; dual specificity mitogen-activated protein kinase kinase 6; MAPKK6; MEK6; MKK6; protein kinase; mitogen activated; kinase 6 (MAP kinase kinase 6); SAPKK3; MEK 6; MAPKK 6; SAPK kinase 3; MAPK/ERK kinase 6; stress-activated protein kinase kinase 3; protein kinase, mitogen-activated, kinase 6 (MAP kinase kinase 6); SAPKK-3;

**Gene ID** [5608](#)

**mRNA Refseq** [NM\\_002758](#)

**Protein Refseq** [NP\\_002749](#)

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<b>MIM</b>	601254
<b>UniProt ID</b>	P52564
<b>Chromosome Location</b>	17q
<b>Pathway</b>	Activated TLR4 signalling, organism-specific biosystem; Amyotrophic lateral sclerosis (ALS), organism-specific biosystem; Amyotrophic lateral sclerosis (ALS), conserved biosystem; CDC42 signaling events, organism-specific biosystem; CDO in myogenesis, organism-specific biosystem; CXCR3-mediated signaling events, organism-specific biosystem; Cellular roles of Anthrax toxin, organism-specific biosystem;
<b>Function</b>	ATP binding; MAP kinase kinase activity; nucleotide binding; protein kinase binding; protein serine/threonine kinase activity; protein tyrosine kinase activity;

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