

## Recombinant Human MAPK1, His-tagged

Cat. No. MAPK1-28700TH Lot. No. (See product label)

### SPECIFICATION

**Product Overview** Recombinant human MAPK1 protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.

**Species** Human

**Source** E.coli

**ProteinLength** 1-360aa

**Description** This gene encodes a member of the MAP kinase family. MAP kinases, also known as extracellular signal-regulated kinases (ERKs), act as an integration point for multiple biochemical signals, and are involved in a wide variety of cellular processes such as proliferation, differentiation, transcription regulation and development. The activation of this kinase requires its phosphorylation by upstream kinases. Upon activation, this kinase translocates to the nucleus of the stimulated cells, where it phosphorylates nuclear targets. One study also suggests that this protein acts as a transcriptional repressor independent of its kinase activity. The encoded protein has been identified as a moonlighting protein based on its ability to perform mechanistically distinct functions. Two alternatively spliced transcript variants encoding the same protein, but differing in the UTRs, have been reported for this gene.

**Form** Liquid. In 20mM Tris-HCl buffer (pH 8.0) containing 10% glycerol, 1mM DTT, 0.1 M NaCl.

**Molecular Mass** 43.5 kDa (380aa), confirmed by MALDI-TOF.

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**AA Sequence**

MGSSHHHHHH SSSLVPRGSH MAAAAAAGAG PEMVRGQVFD VGPRYTNSLY  
 IGEGAYGMVC SAYDNVNKVR VAIKKISPFH HQTTCQRTLREIKILLRFRH  
 ENIIGINDII RAPTIEQMKD VYIVQDLMET DLYKLLKTQH LSNDHICYFL  
 YQILRGLKYI HSANVLHRDL KPSNLLLNTTCDLKICDFGL ARVADPDHDH  
 TGFLTEYVAT RWYRAPEIML NSKGYTKSID IWSVGCILAE MLSNRPIFPG  
 KHYLDQLNHI LGILGSPSQEDLNCIINLKA RNYLLSLPHK NKVPWNRLFP  
 NADSKALDLL DKMLTFNPHK RIEVEQALAH PYLEQYYDPS DEPIAEAPFK  
 FDMELDDLPEKELKELIFEE TARFQPGYRS

**Purity** > 95% by SDS - PAGE

**Storage** Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.

**Concentration** 1 mg/ml (determined by Bradford assay)

## GENE INFORMATION

**Gene Name** [MAPK1 mitogen-activated protein kinase 1 \[ Homo sapiens \]](#)

**Official Symbol** MAPK1

**Synonyms** MAPK1; mitogen-activated protein kinase 1; ERK; p38; p40; p41; ERK2; ERT1; MAPK2; PRKM1; PRKM2; P42MAPK; p41mapk; p42-MAPK; MAP kinase 2; Mitogen-activated protein kinase 2; Extracellular signal-regulated kinase 2; OTTHUMP00000174492; MAP kinase 2; protein tyrosine kinase ERK2

**Gene ID** [5594](#)

**mRNA Refseq** [NM\\_138957](#)

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<b>Protein Refseq</b>	NP_620407
<b>MIM</b>	176948
<b>UniProt ID</b>	P28482
<b>Chromosome Location</b>	22q11.21
<b>Pathway</b>	AGE/RAGE pathway; ARMS-mediated activation; Acute myeloid leukemia
<b>Function</b>	RNA polymerase II carboxy-terminal domain kinase activity; mitogen-activated protein kinase kinase kinase binding; phosphatase binding

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