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**Product Data Sheet**


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Product Name: MAPK1 Human, Active

Cat. No.: GP22549

Batch No.: 1

**Product Data**

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Mitogen-activated protein kinase 1; EC 2.7.11.24; Extracellular signal-regulated kinase 2; ERK-2; Mitogen-activated protein kinase 2; MAP kinase 2; MAPK 2; p42-MAPK; ERT1; ERK; p38; p40; p41; ERK2; MAPK2; PRKM1; PRKM2; P42MAPK; p41mapk.		
Amino Acid Sequence	maaaaaagag pemvrgqvfd vgprytnlsy igegaygmvc saydnvnkvr vaikkispfe hqtycqrtr eikillrfrh eniigindii raptieqmkd vyivqdlmet dlykllktqh lsndhicyfl yqilrglkyi hsanvlhrdl kpsnllntt cdlkicdfgl arvadpdhdh tgflteyvat rwyrapeiml nskgytksid iwsvgcilae mlsnrpifpg khyldqlnhi lgilgspsqe dlnciinlka rnyllslphk nkvpwnrlfp nadskaldll dkmltfnphk rieveqalah pyleqyydps depiaeapfk fdmelddlpk eklkelifee tarfqpgyrs.		
Formulation	MAPK1 protein solution is supplied in 50mM HEPES pH 7.5, 100mM NaCl, 5mM DTT and 20% glycerol.		

**Introduction**

Mitogen-activated protein kinase 1 (MAPK1) is also known as "extracellular signal-regulated kinase 2" (ERK2). Two similar (85% sequence identity) protein kinases were originally called ERK1 and ERK2. They were found during a search for protein kinases that are rapidly phosphorylated after activation of cell surface tyrosine kinases such as the epidermal growth factor receptor. Phosphorylation of ERKs leads to the activation of their kinase activity. The molecular events linking cell surface receptors to activation of ERKs are complex. It was found that RasGTP-binding proteins are involved in the activation of ERKs. Another protein kinase, Raf-1, was shown to phosphorylate a "MAPK kinase", thus qualifying as a "MAPK kinase kinase". The MAPK kinase was named "MAPK/ERK kinase" (MEK). Receptor-linked tyrosine kinases, Ras, Raf, MEK and MAPK could be fitted into a signaling cascade linking an extracellular signal to MAPK

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

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activation. Transgenic gene knockout mice lacking MAPK1 have major defects in early development.

### Stability

Store vial at -20°C to -80°C . Avoid multiple freeze-thaw cycles.

### Background

MAPK1 Human Recombinant is a non-glycosylated full length chain containing amino acids Met1-Ser360 and having a calculated molecular mass of 41,762 Dalton. MAPK1 is purified by proprietary chromatographic techniques.

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