
Product Data Sheet

Product Name: MAPK1 Human, His

Cat. No.: GP22550

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	<p>MGSSHHHHHH SSGLVPRGSH MAAAAAAGAG PEMVRGQVFD VGPRYTNSLY IGEGAYGMVC SAYDNVNKVR VAIKKISPFE HQTYCQRTL R EIKILLRFRH ENIIGINDII RAPTIEQMKD VYIVQDLMET DLYKLLKTQH LSN DHICYFL YQILRGLKYI H SANVLHRDL KPSNLLLNTT CDLKICDFGL ARVADPDHDH TGFLTEYVAT RWYRAPEIML NSKGYTKSID IWSVGCILAE MLSNRPIFPG KHYLDQLNHI LGILGSPSQE MGSSHHHHHH SSGLVPRGSH MAAAAAAGAG PEMVRGQVFD VGPRYTNSLY IGEGAYGMVC SAYDNVNKVR VAIKKISPFE HQTYCQRTL R EIKILLRFRH ENIIGINDII RAPTIEQMKD VYIVQDLMET DLYKLLKTQH LSN DHICYFL YQILRGLKYI H SANVLHRDL KPSNLLLNTT CDLKICDFGL ARVADPDHDH TGFLTEYVAT RWYRAPEIML NSKGYTKSID IWSVGCILAE MLSNRPIFPG KHYLDQLNHI LGILGSPSQE DLNCIINLKA RNYLLSLPHK NKVPWNRLFP NADSKALDLL DKMLTFNPHK RIEVEQALAH PYLEQYYDPS DEPIAEAPFK FDMELDDL PK EKLKELIFEE TARFQPGYRS.</p>		
Formulation	The MAPK1 solution contains 20 mM Tris-HCl buffer (pH 8.0), 1mM DTT and 10% 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

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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 Ras GTP-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 activation. Transgenic gene knockout mice lacking MAPK1 have major defe

Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Background

MAPK1 Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 380 amino acids (1-360 a.a.) and having a molecular mass of 43.5 kDa. MAPK1 is fused to a 20 amino acids His-tag at N-terminus & purified by proprietary chromatographic techniques.

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