

MAPK1 Human, His

Description: 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. The MAPK1 is purified by proprietary chromatographic techniques.

Catalog #: PKPS-367

For research use only.

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.

Source: Escherichia Coli.

Physical Appearance: Sterile Filtered colorless solution.

Amino Acid Sequence: MGSSHHHHHH SSGLVPRGSH MAAAAAGAG PEMVRGQVFD
VGPRYTNSY IGEGAYGMVC SAYDNVNKVR VAIKKISPFE HQTTCQRTL R EIKILLRFRH
ENIIGINDII RAPTIEQMKD VYIVQDLMET DLYKLLKTQH LSNDHICYFL YQILRGLKYI
HSANVLHRDL KPSNLLLNTT CDLKICDFGL ARVADPDHHD TGFLTEYVAT RWYRAPEIML
NSKGYTKSID IW

Purity: Greater than 95.0% as determined by SDS-PAGE.

Formulation:

The MAPK1 solution contains 20 mM Tris-HCl buffer (pH 8.0), 1mM DTT and 10% glycerol.

Stability:

MAPK1 although stable 4C for 4 weeks, should be stored desiccated below -18C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

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 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 defects.

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