



Product Datasheet

Product Name	ERK2/MAPK1 Active Enzyme Human Recombinant
Cata No	CB500821
Source	Escherichia Coli.
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, ERK1, ERK, p38, p40, p41, ERK2, MAPK2, PRKM1, PRKM2, P42MAPK, p41mapk.

Description

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 activation.

Transgenic gene knockout mice lacking MAPK1

have major defects in early development.

ERK2 Recombinant (extracellular signal-regulated kinase) a Mitogen-Activated Protein Kinase, is a highly active form produced by phosphorylation of the purified ERK2/MAPK1 in vitro with MEK1 is a non-glycosylated polypeptide chain containing amino acids 2-480 and having a molecular mass of 44.6 kDa.

ERK2/MAPK1 contains an amino terminal polyhistidine tag and is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile Filtered clear solution.

Purity

Greater than 95.0% as determined by SDS-PAGE.

Formulation

ERK2 is supplied containing 50mM Tris-HCL, 150mM NaCl, 1mM DTT, 50% glycerol, pH 8.5.

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