Product Data Sheet

Product Name:	MAPK1 Human
Cat. No.:	GP22548
Batch No.:	1

Product Data

Purity	>98%	Source	Escherichia Coli.
Phycical 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.		
Formulation	MAPK1 is supplied containing 50mM Tris-HCL, 150mM NaCl, 2mM DTT, pH 8.0, 100 Units*/mg.		

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 kinasessuch 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 knockoutmice lacking MAPK1 have major defects in early development.

Stability

MAPK1 should be stored at 4°C if entire vial will be used within 2-4 weeks. For long term storage it is recommended to store at -20°C . Avoid multiple freeze-thaw cycles.

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

MAPK1 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 having a molecular mass of 44.6 kDa. MAPK1 is purified by proprietary chromatographic techniques.

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