

ERK1 Protein, Human (GST)

Cat. No.:	HY-P701678
Synonyms:	MAPK3; Mitogen-activated protein kinase 3; MAP kinase 3; MAPK 3; ERT2; Extracellular signal-regulated kinase 1; ERK-1; Insulin-stimulated MAP2 kinase; MAP kinase isoform p44; p44-MAPK; Microtubule-associated protein 2 kinase; p44-ERK1
Species:	Human
Source:	E. coli
Accession:	P27361 (A2-P379)
Gene ID:	5595
Molecular Weight:	

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 µm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	Please use rapid thawing with running water to thaw the protein.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	ERK1, a serine/threonine kinase, stands as a vital component in the MAP kinase signal transduction pathway, working in concert with MAPK1/ERK2 to orchestrate the MAPK/ERK cascade. This pathway, activated by stimuli such as KIT and KITLG/SCF, plays a pivotal role in diverse biological functions, including cell growth, adhesion, survival, and differentiation. ERK1, along with MAPK1/ERK2, influences transcription, translation, and cytoskeletal rearrangements, while also contributing to the initiation and regulation of meiosis, mitosis, and postmitotic functions in differentiated cells through the phosphorylation of numerous transcription factors. With approximately 160 substrates identified for ERKs, their targets span various cellular compartments, participating in processes such as transcription regulation, translation, mitosis, and apoptosis. Additionally, the MAPK/ERK cascade is implicated in endosomal dynamics, lysosome processing, endosome cycling through the perinuclear recycling compartment (PNRC), and the fragmentation of the Golgi apparatus during mitosis. Noteworthy substrates include transcription factors, cytoskeletal elements, regulators of apoptosis, regulators of translation, as well as diverse signaling-related molecules, protein kinases, and phosphatases, thereby extending the cascade's specificity and amplifying its impact on cellular responses.
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Caution: Product has not been fully validated for medical applications. For research use only.

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