Recombinant MK03 protein (His tag)

Catalog Number	542231
Synonyms	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
Expression System	E. coli
Accession	P27361
Molecular Weight	Predictes a molecular mass of 44.66 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 46 kDa band.

Product Information

Sequence Region	2-379
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 2-379 aa (P27361) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human MAPK3/ERK1 Protein Fragment (residues 2-379) - A high-purity, functionally relevant fragment encompassing the complete protein kinase domain of Mitogen-activated protein kinase 3, essential for studying MAPK/ERK signaling pathways in cellular regulation. MAPK3 (ERK1) is a crucial serine/threonine kinase that serves as an essential component of the MAP kinase signal transduction pathway. This kinase plays a pivotal role in the MAPK/ERK cascade, mediating diverse biological functions including cell growth, adhesion, survival, and differentiation through regulation of transcription, translation, and cytoskeletal rearrangements. The protein participates in signaling cascades initiated by various stimuli and phosphorylates approximately 160 known substrates, including transcription factors, cytoskeletal elements, apoptosis regulators, and translation regulators. MAPK3 localizes to multiple cellular compartments including cytoplasm, nucleus, membrane caveolae, and focal adhesions, with autophosphorylation promoting nuclear localization. The recombinant fragment (residues 2-379) contains the complete protein kinase domain, making it an ideal tool for investigating kinase activity, substrate interactions, and signaling mechanisms in this critical cellular pathway.