Recombinant MK07 protein (His tag)

Catalog Number	540242
Synonyms	MAP kinase 7; MAPK 7; Big MAP kinase 1; BMK-1; Extracellular signal-regulated kinase 5; ERK-5
Species	Human
Expression System	E. coli
Accession	Q13164
Molecular Weight	Predictes a molecular mass of 41.96 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 42 kDa band.

Product Information

Sequence Region	48-399
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 48-399 aa (Q13164) 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	Introducing the recombinant human Mitogen-activated protein kinase 7 (MAPK7) fragment (amino acids 48-399), a high-quality protein encompassing the complete kinase domain. This product is engineered for researchers studying cellular signaling pathways, proliferation, differentiation, and survival mechanisms, providing a targeted tool for investigating MAPK7-specific functions without interference from regulatory regions. MAPK7, also known as ERK5 or BMK-1, is a key component of the MAPK/ERK signaling pathway in humans. It plays crucial roles in various cellular processes including proliferation, differentiation, and cell survival. Activated by MAP2K5 through a Ras-independent pathway, MAPK7 translocates to the nucleus upon activation where it phosphorylates downstream targets such as MEF2C and SGK1. The protein functions as a negative regulator of apoptosis in cardiomyocytes and contributes to endothelial function and blood vessel integrity maintenance. MAPK7 exhibits distinct specificity, interacting exclusively with MAP2K5 rather than other MEK/ERK pathways. The provided fragment (48-399) contains the complete protein kinase domain (55-347), enabling focused study of its catalytic functions and interactions within signaling networks.