Recombinant MK13 protein (His tag)

Catalog Number	544081
Synonyms	MAP kinase 13; MAPK 13; Mitogen-activated protein kinase p38 delta; MAP kinase p38 delta; Stress-activated protein kinase 4
Species	Human
Expression System	E. coli
Accession	O15264
Molecular Weight	Predictes a molecular mass of 43.75 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 45 kDa band.

Product Information

Sequence Region	1-365
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 1-365 aa (O15264) 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 Mitogen-activated protein kinase 13 (MAPK13), encompassing the full-length protein kinase domain (residues 1-365). This high-purity fragment is an essential tool for investigating p38 MAPK signaling cascades, kinase activity assays, and cellular stress response mechanisms in life science research. MAPK13 is a serine/threonine kinase functioning as a critical component of the MAP kinase signal transduction pathway. As one of the four p38 MAPK isoforms, it mediates cellular responses to extracellular stimuli including pro-inflammatory cytokines and physical stress. MAPK13 directly phosphorylates transcription factors (ELK1, ATF2) and downstream kinases (MAPKAPK2), regulates protein translation via EEF2K inactivation, and contributes to cytoskeletal remodeling through phosphorylation of MAPT and STMN1. It plays documented roles in UV-induced CXCL14 expression, epidermal keratinocyte differentiation, apoptosis, skin tumor development, MYB degradation under stress, and insulin secretion regulation in pancreatic beta cells through PRKD1 modulation. With an estimated 200-300 substrates, this kinase represents a key node in stress-responsive signaling networks.