Recombinant MP2K7 protein (His tag)

Catalog Number	544050
Synonyms	MAP kinase kinase 7; MAPKK 7; JNK-activating kinase 2; MAPK/ERK kinase 7; MEK 7; Stress-activated protein kinase kinase 4; SAPK kinase 4; SAPKK-4; SAPKK4; c-Jun N-terminal kinase kinase 2; JNK kinase 2; JNKK 2
Species	Human
Expression System	E. coli
Accession	O14733
Molecular Weight	Predictes a molecular mass of 39.24 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 40 kDa band.

Product Information

Sequence Region	90-419
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 90-419 aa (O14733) 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 MAP2K7 Protein Kinase Domain (aa 90-419) - A high-purity fragment specifically engineered to encompass the complete protein kinase domain of Dual Specificity Mitogen-Activated Protein Kinase Kinase 7. This fragment serves as an essential tool for investigating JNK signaling pathway activation, kinase activity studies, and stress response mechanisms in cellular systems. MAP2K7 (Dual Specificity Mitogen-Activated Protein Kinase Kinase 7) functions as a critical component of the MAP kinase signal transduction pathway, specifically serving as an essential activator of the stress-activated protein kinase/c-Jun N-terminal kinase (SAP/JNK) signaling cascade. This kinase works in concert with MAP2K4/MKK4 to fully activate JNKs through complementary phosphorylation of the Thr-Pro-Tyr motif, with MAP2K7 specifically targeting the Thr residue. The protein plays a vital role in JNK signal transduction activated by pro-inflammatory cytokines and participates in mitochondrial death signaling pathways that regulate apoptosis. MAP2K7 is localized in both the nucleus and cytoplasm, and recent research has also identified its involvement in a non-canonical MAPK signaling pathway that enhances AP-1-mediated transcription in response to APOE. The recombinant fragment (aa 90-419) contains the complete protein kinase domain (aa 120-380), making it an ideal reagent for studying the specific enzymatic functions and signaling mechanisms of this crucial kinase.