Recombinant M4K2 protein (His tag)

Catalog Number	540218
Synonyms	B lymphocyte serine/threonine-protein kinase; Germinal center kinase; GC kinase; MAPK/ERK kinase kinase kinase 2; MEK kinase kinase 2; MEKKK 2; Rab8-interacting protein
Species	Human
Expression System	E. coli
Accession	Q12851
Molecular Weight	Predictes a molecular mass of 40.53 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 41 kDa band.

Product Information

Sequence Region	473-820
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 473-820 aa (Q12851) 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 MAP4K2 (473-820) Fragment: A high-purity protein fragment encompassing the CNH domain (residues 482-793) of Mitogen-activated protein kinase kinase kinase kinase 2. This product is engineered for studying domain-specific functions in MAPK signaling pathways, including stress-activated JNK and p38 activation, and Hippo pathway regulation, providing researchers with a precise tool for targeted mechanistic investigations. MAP4K2 (MAP4K2 gene) is a serine/threonine-protein kinase that functions as an essential upstream activator in MAP kinase signal transduction. It primarily drives the stress-activated protein kinase/c-Jun N-terminal kinase (SAP/JNK) pathway and, to a lesser extent, the p38 MAPK pathway, responding to stimuli such as pathogen-associated molecular patterns (e.g., LPS, flagellin), IL-1, and CD40 engagement. MAP4K2 enhances MAP3K1 oligomerization to relieve autoinhibition and also activates MAP3K10/MLK2 and MAP3K11/MLK3. Additionally, it contributes to Hippo pathway signaling by phosphorylating LATS1/2, influencing organ size control and tumor suppression through proliferation restriction and apoptosis promotion. Subcellularly, MAP4K2 localizes to the cytoplasm, basolateral cell membrane, and Golgi apparatus membrane as a peripheral membrane protein, implicating roles in vesicle targeting or fusion. The provided fragment (473-820) contains the CNH domain, enabling focused studies on its regulatory functions without interference from other regions.