Recombinant MK11 protein (His tag)

Catalog Number	547357
Synonyms	MAP kinase 11; MAPK 11; Mitogen-activated protein kinase p38 beta; MAP kinase p38 beta; p38b; Stress-activated protein kinase 2b; SAPK2b; p38-2
Species	Human
Expression System	E. coli
Accession	Q15759
Molecular Weight	Predictes a molecular mass of 43.02 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 45 kDa band.

Product Information

Sequence Region	1-364
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 1-364 aa (Q15759) 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 MAPK11 (MAP kinase p38 beta) Protein Kinase Domain Fragment (aa 1-364) – A high-purity, functionally active protein fragment ideal for investigating the critical signaling pathways mediated by the p38 MAPK cascade. This product encompasses the complete protein kinase domain, enabling robust in vitro kinase assays, substrate identification, and mechanistic studies of stress-responsive cellular processes. Mitogen-activated protein kinase 11 (MAPK11), also known as p38 beta, is a serine/threonine kinase that serves as an essential component of the MAPK signal transduction pathway. It is activated by extracellular stimuli such as pro-inflammatory cytokines and physical stress, leading to phosphorylation of a broad range of substrates including transcription factors (e.g., ATF1, ELK1, TP53), downstream kinases (e.g., RPS6KA5/MSK1, MAPKAPK2/MK2), and chromatin modifiers. MAPK11 plays a key role in regulating gene expression, protein synthesis, inflammasome activation (e.g., via NLRP1 phosphorylation in response to UV-B), and cellular responses to inflammation and stress. Its functions are largely redundant with MAPK14. The protein localizes to both the cytoplasm and nucleus, facilitating its involvement in diverse signaling cascades that control proliferation, apoptosis, and immune responses.