Recombinant DUS18 protein (His tag)

Catalog Number	547781
Synonyms	Low molecular weight dual specificity phosphatase 20; LMW-DSP20
Species	Human
Expression System	E. coli
Accession	Q8NEJ0
Molecular Weight	Predictes a molecular mass of 22.72 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 23 kDa band.

Product Information

Sequence Region	1-188
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 1-188 aa (Q8NEJ0) 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 Dual Specificity Protein Phosphatase 18 (DUSP18), encompassing amino acids 1-188, provides researchers with a functional fragment containing the complete tyrosine-protein phosphatase domain. This high-quality protein enables precise investigation of DUSP18's dual-specific phosphatase activity and its role in MAPK signaling pathways. Dual Specificity Protein Phosphatase 18 (DUSP18) is a human enzyme capable of dephosphorylating both phosphotyrosine and phosphothreonine residues, with demonstrated preference for diphosphorylated MAPK peptides and phosphotyrosine over phosphothreonine. The enzyme exhibits phosphatase activity toward synthetic substrates like p-nitrophenyl phosphate. DUSP18 displays dynamic subcellular localization, primarily residing in the cytoplasm and nucleus under normal conditions, with additional presence at the mitochondrial inner membrane. Notably, the protein translocates to the cytoplasm in response to apoptotic stimuli such as staurosporine treatment, suggesting a potential role in cellular stress response pathways. This recombinant fragment (1-188) contains the complete functional phosphatase domain, making it an ideal tool for studying DUSP18's enzymatic mechanisms and regulatory functions.