Recombinant DUS21 protein (His tag)

Catalog Number	548244
Synonyms	Low molecular weight dual specificity phosphatase 21; LMW-DSP21
Species	Human
Expression System	E. coli
Accession	Q9H596
Molecular Weight	Predictes a molecular mass of 23.18 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 23 kDa band.

Product Information

Sequence Region	1-190
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 1-190 aa (Q9H596) 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 21 (DUSP21) fragment (amino acids 1-190), encompassing the complete tyrosine-protein phosphatase domain. This high-purity protein serves as an essential tool for investigating phosphatase activity, sperm motility regulation, and microtubule-associated signaling pathways. Dual Specificity Protein Phosphatase 21 (DUSP21) functions as a protein phosphatase component of sperm flagellar doublet microtubules and acts as a key regulator of sperm motility through dephosphorylation of sperm doublet microtubule proteins. This enzyme demonstrates catalytic activity toward both phosphotyrosine and phosphothreonine residues, with preference for phosphotyrosine and diphosphorylated MAPK peptides. DUSP21 exhibits complex subcellular localization, being present in the cytoplasm, nucleus, mitochondrial inner membrane (matrix side), and specifically within the flagellar axoneme cytoskeleton, reflecting its multifaceted roles in cellular signaling and sperm function.