Recombinant MESH1 protein (His tag)

Catalog Number	543137
Synonyms	diphosphate; HD domain-containing protein 3; Metazoan SpoT homolog 1; MESH1; Penta-phosphate guanosine-3'-pyrophosphohydrolase; (ppGpp)ase
Species	Human
Expression System	E. coli
Accession	Q8N4P3
Molecular Weight	Predictes a molecular mass of 21.85 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 24 kDa band.

Product Information

Sequence Region	2-179
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 2-179 aa (Q8N4P3) 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 MESH1 (HD domain-containing protein 3) Fragment (residues 2-179) is a high-purity protein designed to encompass the full HD domain. This fragment serves as an essential tool for studying ppGpp hydrolysis and its role in cellular stress and starvation responses, offering researchers a targeted reagent for functional and mechanistic investigations. MESH1 (Guanosine-3',5'-bis(diphosphate) 3'-pyrophosphohydrolase) is a key enzyme in the starvation response, specifically hydrolyzing the signaling nucleotide ppGpp (guanosine tetraphosphate). This activity is critical for regulating cellular adaptation to nutrient deprivation, linking MESH1 to metabolic stress pathways in human cells. The provided fragment spans the complete HD domain, enabling focused research on the enzymatic and regulatory functions of this conserved region without interference from other protein segments.