Recombinant DTWD2 protein (His tag)

Catalog Number	540770
Synonyms	DTW domain-containing protein 2
Species	Human
Expression System	E. coli
Accession	Q8NBA8
Molecular Weight	Predictes a molecular mass of 29.61 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 30 kDa band.

Product Information

Sequence Region	55-298
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 55-298 aa (Q8NBA8) 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 tRNA-uridine aminocarboxypropyltransferase 2 (DTWD2) fragment (residues 55-298), a highly soluble and stable protein unit ideal for structural studies and enzymatic characterization of tRNA modification mechanisms. tRNA-uridine aminocarboxypropyltransferase 2 (DTWD2) is a human enzyme that catalyzes the formation of 3-(3-amino-3-carboxypropyl)uridine (acp3U) modifications at position 20a in the D-loop of cytoplasmic tRNAs, with weaker activity at position 20. This modification is critical for glycoRNA biosynthesis, where acp3U serves as an attachment site for N-glycans on tRNAs, enabling the formation of glycoRNAs—RNA molecules modified with secretory N-glycans presented on the cell surface. The full-length protein exhibits isoform-specific subcellular localization: isoform 1 is cytoplasmic, while isoform 2 localizes primarily to the nucleus but is also found in the cytoplasm, reflecting its roles in RNA processing and cellular signaling pathways.