Recombinant DTWD1 protein (His tag)

Catalog Number	549019
Synonyms	DTW domain-containing protein 1
Species	Human
Expression System	E. coli
Accession	Q8N5C7
Molecular Weight	Predictes a molecular mass of 16.62 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 17 kDa band.

Product Information

Sequence Region	33-164
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 33-164 aa (Q8N5C7) 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 fragment of human tRNA-uridine aminocarboxypropyltransferase 1 (DTWD1), corresponding to residues 33-164. This 132-amino acid fragment represents a stable, soluble unit ideal for structural studies and biochemical characterization of acp3U modification activity in cytoplasmic tRNAs. The full-length DTWD1 protein catalyzes the formation of 3-(3-amino-3-carboxypropyl)uridine (acp3U) at position 20 in the D-loop of several cytoplasmic tRNAs, a critical post-transcriptional modification. This enzymatic activity (EC 2.5.1.25) is essential for proper tRNA function and cellular translation processes. The protein is localized to the nucleus, where it performs its modification role, as supported by experimental evidence. The selected fragment provides a functional unit for investigating the molecular mechanisms of tRNA modification without structural domains that might complicate experimental analysis.