Recombinant DUS2 protein (His tag)

Catalog Number	546090
Synonyms	20; P; Dihydrouridine synthase 2; Up-regulated in lung cancer protein 8; URLC8; tRNA-dihydrouridine synthase 2-like; hDUS2
Species	Human
Expression System	E. coli
Accession	Q9NX74
Molecular Weight	Predictes a molecular mass of 51.33 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 52 kDa band.

Product Information

Sequence Region	1-443
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 1-443 aa (Q9NX74) 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 DUS2 (hDUS2) Fragment (1-443 aa) – a high-purity protein fragment encompassing the full DRBM domain, ideal for investigating tRNA modification mechanisms and EIF2AK2/PKR regulation in vitro. The full-length tRNA-dihydrouridine(20) synthase [NAD(P)+]-like (DUS2/hDUS2) is a human enzyme that catalyzes the NADPH-dependent synthesis of dihydrouridine at position U20 in cytoplasmic tRNAs, a conserved modification critical for tRNA stability and function. Its activity is specifically dependent on guanosine at position 19 in tRNA substrates. Additionally, DUS2 negatively regulates the activation of EIF2AK2/PKR, implicating it in cellular stress response pathways. The protein is primarily localized to the cytoplasm and endoplasmic reticulum, where it performs its key roles in post-transcriptional RNA modification and signaling regulation.