Recombinant DUT protein (His tag)

Catalog Number	546925
Synonyms	dUTPase; dUTP pyrophosphatase
Species	Human
Expression System	E. coli
Accession	P33316
Molecular Weight	Predictes a molecular mass of 17.05 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 17 kDa band.

Product Information

Sequence Region	112-252
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 112-252 aa (P33316) 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 Deoxyuridine 5'-triphosphate nucleotidohydrolase (dUTPase) Fragment (residues 112-252) is a high-purity, stable protein fragment ideal for structural studies and biochemical assays. This fragment, derived from the mitochondrial isoform of dUTPase, retains key functional characteristics and offers excellent solubility for research applications in DNA metabolism and enzyme kinetics. Deoxyuridine 5'-triphosphate nucleotidohydrolase (dUTPase) is a crucial enzyme in human cells that catalyzes the hydrolysis of dUTP into dUMP and inorganic pyrophosphate. This reaction serves two essential biological functions: preventing uracil misincorporation into DNA during replication and providing dUMP as the substrate for thymidylate biosynthesis. The enzyme exists in multiple isoforms with distinct subcellular localizations, including nuclear (isoform 2) and mitochondrial (isoform 3) forms, reflecting its importance in maintaining genomic integrity across cellular compartments. Additionally, dUTPase has been shown to regulate peroxisome proliferator-activated receptor (PPAR) activity through N-terminal interactions and is essential for embryonic development. The selected fragment (residues 112-252) represents a stable, soluble region optimized for experimental applications while maintaining relevance to the full-length protein's biological significance.