Recombinant DNPH1 protein (His tag)

Catalog Number	537231
Synonyms	2'-deoxynucleoside 5'-phosphate N-hydrolase 1; c-Myc-responsive protein RCL
Species	Human
Expression System	E. coli
Accession	O43598
Molecular Weight	Predictes a molecular mass of 20.63 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 22 kDa band.

Product Information

Sequence Region	2-174
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 2-174 aa (O43598) 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 DNPH1 Protein Fragment (2-174) - A high-purity, soluble fragment of human 5-hydroxymethyl-dUMP N-hydrolase (c-Myc-responsive protein RCL), specifically designed for structural and biochemical studies of this key enzyme in nucleotide salvage pathways. DNPH1 encodes 5-hydroxymethyl-dUMP N-hydrolase, an essential component of a nucleotide salvage pathway that eliminates epigenetically modified nucleotides. This enzyme functions in a two-step process that removes cytotoxic 5-hydroxymethyl-dUMP (hmdUMP) through hydrolysis of the N-glycosidic bond, producing 5-hydroxymethyluracil and 2-deoxy-D-ribose 5-phosphate. This activity prevents genomic integration of cytotoxic nucleotides, representing a crucial cellular defense mechanism. The full-length protein localizes to both the cytoplasm and nucleus, reflecting its role in nucleotide metabolism and genomic maintenance. The recombinant fragment (amino acids 2-174) encompasses the functional domain for detailed mechanistic studies.