Recombinant UNG protein (His tag)

Catalog Number	537520
Synonyms	UDG
Species	Human
Expression System	E. coli
Accession	P13051
Molecular Weight	Predictes a molecular mass of 29.96 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 30 kDa band.

Product Information

Sequence Region	64-313
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 64-313 aa (P13051) 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	This product is a recombinant fragment of Human Uracil-DNA glycosylase (UDG), encompassing amino acids 64-313. It is engineered for high solubility and stability, making it an ideal tool for structural studies and biochemical assays focused on uracil excision and base excision repair mechanisms. Uracil-DNA glycosylase (UDG), encoded by the UNG gene in Homo sapiens, is a critical enzyme in DNA repair that hydrolyzes the N-glycosidic bond to remove uracil from single- and double-stranded DNA, forming abasic sites. It plays essential roles in error-free base excision repair during DNA replication by excising misincorporated uracil or deaminated cytosines, thereby preventing mutations. Additionally, UDG is involved in immunoglobulin diversification processes, such as antibody affinity maturation and class switch recombination, by processing uracil residues introduced by activation-induced cytidine deaminase (AICDA). The full-length protein localizes to both the nucleus (isoform 2) and mitochondrion (isoform 1), with nuclear isoforms associating with replication foci to ensure genomic integrity. This fragment represents a stable, soluble unit optimized for research applications.