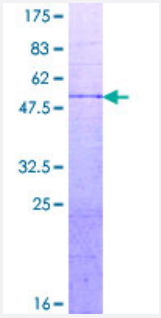
Full-Length

# DUT (Human) Recombinant Protein (P01)

Catalog # H00001854-P01 Size 25 ug, 10 ug

## Applications




## Specification

| | |
|---|---|
| **Product Description** | Human DUT full-length ORF ( NP_001020419.1, 1 a.a. - 252 a.a.) recombinant protein with GST-tag at N-terminal. |
| **Sequence** | MTPLCPRPALCYHFLTSLLRSAMQNARGARQRAEAAVLSGPGPPLGRAAQHGIPRPLSSAGRLS QGCRGASTVGAAGWKGELPKAGGSPAPGPETPAISPSKRARPAEVGGMQLRFARLSEHATAPT RGSARAAGYDLYSAYDYTIPPMEKAVVKTDIQIALPSGCYGRVAPRSGLAAKHFIDVGAGVIDEDYR GNVGVVLFNFGKEKFEVKKGDRIAQLICERIFYPEIEEVQALDDTERGSGGFGSTGKN |
| **Host** | Wheat Germ (in vitro) |
| **Theoretical MW (kDa)** | 53 |
| **Preparation Method** | *in vitro* wheat germ expression system |
| **Purification** | Glutathione Sepharose 4 Fast Flow |
| **Quality Control Testing** | 12.5% SDS-PAGE Stained with Coomassie Blue. |
| **Storage Buffer** | 50 mM Tris-HCl, 10 mM reduced Glutathione, pH=8.0 in the elution buffer. |
| **Storage Instruction** | Store at -80°C. Aliquot to avoid repeated freezing and thawing. |
| **Note** | Best use within three months from the date of receipt of this protein. |

## Applications

- Enzyme-linked Immunoabsorbent Assay
- Western Blot (Recombinant protein)
- Antibody Production
- Protein Array

## Gene Info — DUT

| | |
|---|---|
| **Entrez GeneID** | 1854 |
| **GeneBank Accession#** | NM_001025248.1 |
| **Protein Accession#** | NP_001020419.1 |
| **Gene Name** | DUT |
| **Gene Alias** | FLJ20622, dUTPase |
| **Gene Description** | deoxyuridine triphosphatase |
| **Omim ID** | 601266 |
| **Gene Ontology** | Hyperlink |
| **Gene Summary** | This gene encodes an essential enzyme of nucleotide metabolism. The encoded protein forms a ubiquitous, homotetrameric enzyme that hydrolyzes dUTP to dUMP and pyrophosphate. This reac tion serves two cellular purposes: providing a precursor (dUMP) for the synthesis of thymine nucle otides needed for DNA replication, and limiting intracellular pools of dUTP. Elevated levels of dUT P lead to increased incorporation of uracil into DNA, which induces extensive excision repair med iated by uracil glycosylase. This repair process, resulting in the removal and reincorporation of dU TP, is self-defeating and leads to DNA fragmentation and cell death. Alternative splicing of this ge ne leads to different isoforms that localize to either the mitochondrion or nucleus. A related pseud ogene is located on chromosome 19. [provided by RefSeq |
| **Other Designations** | dUTP nucleotidohydrolase\|dUTP pyrophosphatase\|deoxyuridine 5'-triphosphate nucleotidohydrol ase |

## Pathway

- Metabolic pathways

- Pyrimidine metabolism

## Disease

- DNA Damage
- Genetic Predisposition to Disease