

Product datasheet for **TP720892M**

DUT (NM_001025248) Human Recombinant Protein

Product data:

Product Type:	Recombinant Proteins
Description:	Purified recombinant protein of Human deoxyuridine triphosphatase (DUT), nuclear gene encoding mitochondrial protein, transcript variant 1
Species:	Human
Expression Host:	E. coli
Expression cDNA Clone or AA Sequence:	Met1-Asn164
Tag:	Tag Free
Predicted MW:	17.7 kDa
Purity:	>95% as determined by SDS-PAGE and Coomassie blue staining
Buffer:	Provided lyophilized from a 0.2 µm filtered solution of 20 mM Tris-HCl, 150 mM NaCl
Endotoxin:	Endotoxin level is < 0.1 ng/µg of protein (< 1 EU/µg)
Storage:	Store at -80°C.
Stability:	Stable for at least 3 months from date of receipt under proper storage and handling conditions.
RefSeq:	NP_001020419
Locus ID:	1854
UniProt ID:	P33316
RefSeq Size:	2146
Cytogenetics:	15q21.1
RefSeq ORF:	756
Synonyms:	dUTPase



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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 reaction serves two cellular purposes: providing a precursor (dUMP) for the synthesis of thymine nucleotides needed for DNA replication, and limiting intracellular pools of dUTP. Elevated levels of dUTP lead to increased incorporation of uracil into DNA, which induces extensive excision repair mediated by uracil glycosylase. This repair process, resulting in the removal and reincorporation of dUTP, is self-defeating and leads to DNA fragmentation and cell death. Alternative splicing of this gene leads to different isoforms that localize to either the mitochondrion or nucleus. A related pseudogene is located on chromosome 19. [provided by RefSeq, Jul 2008]

Protein Families:

Druggable Genome

Protein Pathways:

Metabolic pathways, Pyrimidine metabolism