

Product datasheet for PH321635

DUT (NM_001948) Human Mass Spec Standard

Product data:

Product Type:	Mass Spec Standards
Description:	DUT MS Standard C13 and N15-labeled recombinant protein (NP_001939)
Species:	Human
Expression Host:	HEK293
Expression cDNA Clone or AA Sequence:	RC221635
Predicted MW:	17.6 kDa
Protein Sequence:	>RC221635 representing NM_001948 Red=Cloning site Green=Tags(s) MPCSEETPAISPSKRARPAEVGGMQLRFARLSEHATAPTRGSARAAGYDLYSAYDYTIIPMEKAVVKTDI QIALPSGCYGRVAPRSLAAKHFIDVGAGVIDEDYRGNVGVVLFNFGKEKFEVKKGDRIAQLICERIFYP EIEEVQALDDTERGSGFGSTGKN TRTRPLEQKLISEEDLAANDILDYKDDDDKV
Tag:	C-Myc/DDK
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Labeling Method:	Labeled with [U- ¹³ C ₆ , ¹⁵ N ₄]-L-Arginine and [U- ¹³ C ₆ , ¹⁵ N ₂]-L-Lysine
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3
Storage:	Store at -80°C. Avoid repeated freeze-thaw cycles.
Stability:	Stable for 3 months from receipt of products under proper storage and handling conditions.
RefSeq:	NP_001939
RefSeq Size:	1874
RefSeq ORF:	492
Synonyms:	dUTPase
Locus ID:	1854
UniProt ID:	P33316



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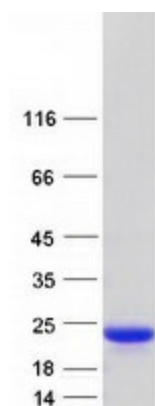
Cytogenetics: 15q21.1

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

Product images:



Coomassie blue staining of purified DUT protein (Cat# [TP321635]). The protein was produced from HEK293T cells transfected with DUT cDNA clone (Cat# [RC221635]) using MegaTran 2.0 (Cat# [TT210002]).