

Product datasheet for **SC302383**

DUT (NM_001025249) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	DUT (NM_001025249) Human Untagged Clone
Tag:	Tag Free
Symbol:	DUT
Synonyms:	dUTPase
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>SC302383 representing NM_001025249. Blue=Insert sequence Red=Cloning site Green=Tag(s)

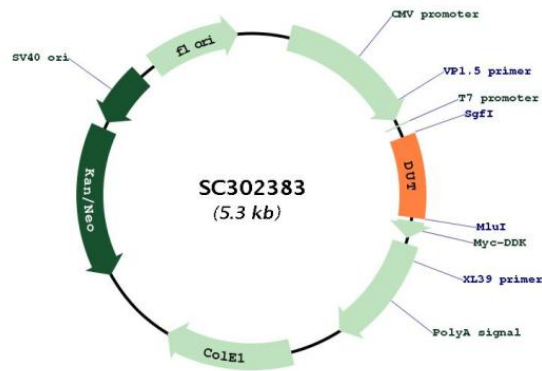
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GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGCAGCTCCGCTTTGCCGGCTCTCCGAGCACGCCACGGCCCCACCCGGGGCTCCGCGCGCGCCGCG
GGCTACGACCTGTACAGTGCCTATGATTACACAATACCACCTATGGAGAAAGCTGTTGTGAAAACGGAC
ATTCAGATAGCGCTCCCTTCTGGGTGTTATGGAAGAGTGGCTCCACGGTCAGGCTTGCTGCAAAACAC
TTTATTGATGTAGGAGCTGGTGCATAGATGAAGATTATAGAGGAAATGTTGGTGTGTACTGTTTAAAT
TTTGGCAAAGAAAAGTTGAAGTCAAAAAGGTGATCGAATTGCACAGCTCATTTGCGAACGGATTTT
TATCCAGAAATAGAAGAAGTTCAAGCCTTGATGACACCGAAAGGGTTCAGGAGTTTTGTTCCACT
GGAAAGAATTAA
ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
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Restriction Sites: Sgfl-Mlul



[View online »](#)

Plasmid Map:



ACCN:	NM_001025249
Insert Size:	426 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
OTI Annotation:	This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_001025249.1](#)

RefSeq Size: 1830 bp

RefSeq ORF: 426 bp

Locus ID: 1854

UniProt ID: [P33316](#)

Cytogenetics: 15q21.1

Protein Families: Druggable Genome

Protein Pathways: Metabolic pathways, Pyrimidine metabolism

MW: 15.4 kDa

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 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]

Transcript Variant: This variant (3) differs in the 5' UTR and uses a downstream start codon, compared to variant 1. It encodes isoform 3, which has a shorter N-terminus that lacks the mitochondrial targeting sequence, compared to isoform 1.