

## Product datasheet for SC126787

### DUT (U90223) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	DUT (U90223) Human Untagged Clone
Tag:	Tag Free
Symbol:	DUT
Synonyms:	dUTPase
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC126787 sequence for U90223 edited (data generated by NextGen Sequencing)

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ATGACTCCCCTCTGCCCTCGCCCCGCGCTCTGCTACCATTTCCTACGTCTCTGCTTCGC
TCAGCGATGCAAAACGCGCGAGGNACGGCAGAGGGCCGAAGCCGCGGTACTCTCCGGGCC
AGGCCCGCCCCTCGGCCGNNCGCGCAGCACGGGATCCCCGCGCGCTGTCCAGCGCT
GGCCGCTGAGCCAAGGCTGCCGCGGAGCCAGTACAGTCGGGGCCGCTGGCTGGAAGGGC
GAGCTTCTAAGGCGGGGGAAGCCCGCGCGGGGCGGAGACACCCGCCATTTACCC
AGTAAGCGGGCCCGCCTGCGGAGGTGGGCGGCATGCAGCTCCGCTTTGCCCGGCTCCTC
GAGCACGCCACGGCCCCACCCGGGCTCCGCGCGCGCCGGGCTACGACCTGTACAGT
GCCTATGATTACACAATACCACCTATGGAGAAAGCTGTTGTGAAAACGGACATTCAGATA
GCGCTCCCTTCTGGGTGTTATGGAAGAGTGGCTCCACGGTCAGGCTTGGCTGCAAAACAC
TTTATTGATGTAGGAGCTGGTGTATAGATGAAGATTATAGAGGAAATGTTGGTGTGTA
CTGTTTAAATTTGGCAAAGAAAAGTTTGAAGTCAAAAAGGTGATCGAATTGCACAGCTC
ATTTGCGAACGGATTTTTATCCAGAAATAGAAGAAGTTCAAGCCTTGGATGACACCGAA
AGGGGTTCCAGGAGGTTTTGGTCCACTGGAAAGAATTAA

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Clone variation with respect to U90223.1  
84 c=>n;140 c=>n;141 g=>n



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**5' Read Nucleotide Sequence:**

>OriGene 5' read for U90223 unedited  
 TGTAAATACGACTCACTATAGGGCGGCCGGAATTCGGCACGAGGGGAAGCCTGGCGCACG  
 TCCGGAGGTGCCGAGGACCCAACAGCCCAAACCTCTGGGGGAAATGACTCCCCTCTGCC  
 TCGCCCCGCGCTCTGCTACCATTTCTTACGTCTCTGCTTCGCTCAGCGATGCAAACGC  
 GCGAGGCGCACGGCAGAGGGCCGAAGCCGCGTACTCTCCGGGCCAGGCCGCCCTCGG  
 CCGCGCCGCGCAGCACGGGATTCCTCCGGCCGCTGTCCAGCGCTGGCCGCCTGAGCCAAGG  
 CTGCCCGGAGCCAGTACAGTCGGGGCCGCTGGCTGGAAGGGCGAGCTTCTTAAGGCGGG  
 GGAAGCCCGGCCCGGGCCGGAGACACCCGCCATTTACCCAGTAAGCGGGCCCGGCC  
 TCGCGAGGTGGGCGCATGCAGCTCCGCTTTGCCCGGCTCTCCGAGCACGCCACGGCCCC  
 CACCCGGGGCTCCGCGCGCGCCGGGCTACGACCTGTACAGTGCCTATGATTACACAAT  
 ACCACCTATGGAGAAAGCTGTTGTGAAAACGGACATTCAGATAGCGCTCCCTTCTGGGT  
 GTNTATGGAAGAGTGGCTCCACGGTCAGGCTTGCTGCAAACACTNTATTGATGTANGA  
 GCTGGTGCATAGATGAAGATTATGAGGAAATGGNTGGGTGTTGACTGGTTAATTTTGG  
 CANAAAANNAGTTTGAAGTANANAGGTGATCGAATTGACAGCTCATTTGCGAACGATTTT  
 TATCCAGAATANAAGAAGTTCAAGCTTGGATACACCNAAGGGTCCAGGGGAGTTTTTGG  
 TACTGGAAGAATTNAAATTATGCCAGACAGAAAACAGAGAGTCTACCCTTTTTCTA  
 AAAAAAAAAAAAAAC

**3' Read Nucleotide Sequence:**

>OriGene 3' read for U90223 unedited  
 GCGGCCGCAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTTAAGAAAAAGTATGACTTCTT  
 GTTTTCTGTTCTTGGCATAAATTTTAATCTTTCCAGTGAACCAAAACCTCCTGAACCC  
 CTTTCGGTGTCAATCAAGCTTGAACCTTCTTCTATTTCTGGATAAAAAATCCGTTTCGAA  
 ATGAGCTGTGCAATTCGATCACCTTTTTGACTTCAAACTTTTCTTTCGCAAAATTAAC  
 AGTACAACACCAACATTTCTCTATAATCTTCATCTATGACACCAGCTCCTACATCAATA  
 AAGTGTTTTGCAGCAAGCCTGACCGTGGAGCCACTCTCCATAACACCCAGAAGGGAGC  
 GCTATCTGAATGTCCGTTTTACAACAGCTTTCTCCATAGGTGGTATTGTGTAATCATAG  
 GCACTGTACAGGTCGTAGCCCGCGCGCGCGGAGCCCCGGGTGGGGGCCGTGGCGTGC  
 TCGGAGAGCCGGGCAAAGCGGAGCTGCATGCCGCCACCTCCGACGGCCGGGCCCGCTTA  
 CTGGGTGAAATGGCGGGTGTCTCCCGCCCCGGCGCCGGGCTTCCCCGCCTTAGGAAGCT  
 CGCCCTTCCAGCCAGCGGCCCGACTGTACTGGCTCCGCGGCAGCCTTTGCTTTGGGCGG  
 CCAACCGCTGGACACGCGCCCGGGAAATCCCCGTGCCTGCCCGCGCCGCTCTAGGGGC  
 GTGCCCGTGTCCCGAAAAGCACCCCGGTCTTGGCGCCTTTGTCCCCCCCCCTTCCCGTT  
 TTCCACCTCTAATAACCTATACACCCACCGATCGTCACTACCCCCCTCTGACTCCT  
 TTCGTAGCACACCAGTTCTTCTCACTTACACATTACTTTATATTCATCCCCACCCACC  
 CTTCTCCGTTCTCGTTATACAAATTACCAATTTCTCCAAATCCGTCCACTTCT

**Restriction Sites:**

NotI-NotI

**ACCN:**

U90223

**Insert Size:**

940 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).

**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).

<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u><a href="#">U90223.1</a></u> , <u><a href="#">AAB94642.1</a></u>
<b>RefSeq Size:</b>	960 bp
<b>RefSeq ORF:</b>	960 bp
<b>Locus ID:</b>	1854
<b>Cytogenetics:</b>	15q21.1
<b>Domains:</b>	dUTPase
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Metabolic pathways, Pyrimidine metabolism
<b>Gene Summary:</b>	<p>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]</p>