

Product datasheet for **RC221635L4V**

DUT (NM_001948) Human Tagged ORF Clone Lentiviral Particle

Product data:

Product Type:	Lentiviral Particles
Product Name:	DUT (NM_001948) Human Tagged ORF Clone Lentiviral Particle
Symbol:	DUT
Synonyms:	dUTPase
Mammalian Cell Selection:	Puromycin
Vector:	pLenti-C-mGFP-P2A-Puro (PS100093)
Tag:	mGFP
ACCN:	NM_001948
ORF Size:	492 bp
ORF Nucleotide Sequence:	The ORF insert of this clone is exactly the same as(RC221635).
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
RefSeq:	NM_001948.3
RefSeq Size:	1874 bp
RefSeq ORF:	495 bp
Locus ID:	1854
UniProt ID:	P33316
Cytogenetics:	15q21.1
Domains:	dUTPase
Protein Families:	Druggable Genome



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Protein Pathways: Metabolic pathways, Pyrimidine metabolism

MW: 17.6 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]