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Product datasheet for RC403776

Telomerase reverse transcriptase (TERT) (NM_198253) Human Mutant ORF Clone

Product data:

Product Type:	Mutant ORF Clones
Product Name:	Telomerase reverse transcriptase (TERT) (NM_198253) Human Mutant ORF Clone
Mutation Description:	K902N
Affected Codon#:	902
Affected NT#:	2706
Nucleotide Mutation:	TERT Mutant (K902N), Myc-DDK-tagged ORF clone of Homo sapiens telomerase reverse transcriptase (TERT), transcript variant 1 as transfection-ready DNA
Effect:	Dyskeratosis congenita
Symbol:	TERT
Synonyms:	CMM9; DKCA2; DKCB4; EST2; hEST2; hTRT; PFBMFT1; TCS1; TP2; TRT
E. coli Selection:	Kanamycin (25 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_198253
ORF Size:	3396 bp
Restriction Sites:	SgfI-RsrII

ORF Nucleotide Sequence:

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>RC403776 representing NM_198253
Red=Cloning site Blue=ORF Green=Tags(s)

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CAGCGTGCGCAGCTACCTGCCCAACACGGTGACCGACGCACTGCGGGGGAGCGGGGCGTGGGGGCTGCTG
CTGCGCCGCGTGGGCGACGACGTGCTGGTTCACCTGCTGGCACGCTGCGCGCTCTTTGTGCTGGTGGCTC
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TGGATTACAAGGATGACGACGA TAAGGTTTAA

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Protein Sequence:

>RC403776 representing NM_198253
Red=Cloning site Green=Tags(s)

MPRAPRCRAVRSLLRSHYREVLPLATFVRRLGPQGWRLVQRGDPAAFRALVAQCLVCVPWDARPPPAAPS
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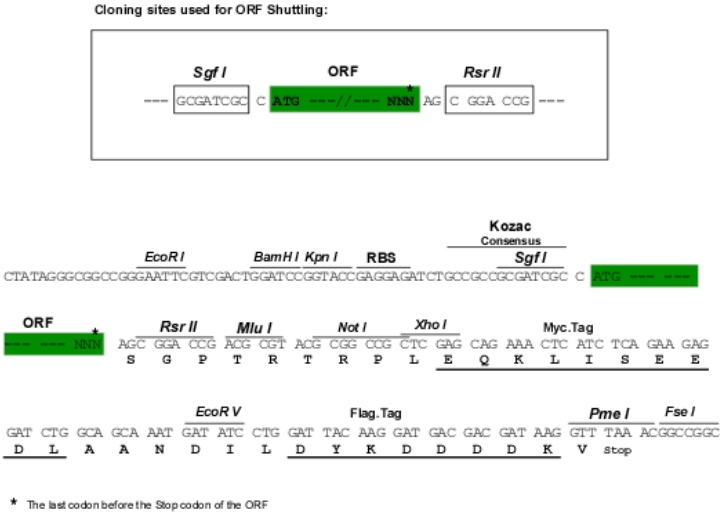
Restriction Sites: SgfI-RsrII

Cloning Scheme:



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OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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.

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).

RefSeq: NP_937983

RefSeq Size: 3396 bp

RefSeq ORF: 3399 bp

Locus ID: 7015

Cytogenetics: 5p15.33

Protein Families: Druggable Genome

MW: 124.5 kDa

Gene Summary: Telomerase is a ribonucleoprotein polymerase that maintains telomere ends by addition of the telomere repeat TTAGGG. The enzyme consists of a protein component with reverse transcriptase activity, encoded by this gene, and an RNA component which serves as a template for the telomere repeat. Telomerase expression plays a role in cellular senescence, as it is normally repressed in postnatal somatic cells resulting in progressive shortening of telomeres. Deregulation of telomerase expression in somatic cells may be involved in oncogenesis. Studies in mouse suggest that telomerase also participates in chromosomal repair, since de novo synthesis of telomere repeats may occur at double-stranded breaks. Alternatively spliced variants encoding different isoforms of telomerase reverse transcriptase have been identified; the full-length sequence of some variants has not been determined. Alternative splicing at this locus is thought to be one mechanism of regulation of telomerase activity. [provided by RefSeq, Jul 2008]

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