

Product datasheet for **RR210889**

Tert (NM_053423) Rat Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Tert (NM_053423) Rat Tagged ORF Clone
Tag: Myc-DDK
Symbol: Tert
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
ORF Nucleotide Sequence: >RR210889 representing NM_053423
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCCCCGCGCTCCTCGTTGCCCGCGCTGCGCTCTCTACTGCGCAGCCGATATCGGGAGGTGTGGCCGC
TGGCGACCTTTGTGCGCGCCTGGGGCTTGAGGGCAGTCGGCTTGTGCAACCCGGGGACCCGAAGTCTT
CCGCACGTTGGTTGCCAGTGCCTAGTGTGCGTGCCTGGGGCTCACAGCCGCCACTGTGACCTTTCC
TTCCACCAGGTGTATCCCTGAAAGAGCTGGTGTCCAGGGTTGTGCAGAACTTTGCGAGCGCGGTGAGA
GGAATGTGCTGGCTTTTGGCTTTGCACTGCTTAACGGGGCCAGAGGTGGGCCTCCCATGGCCTTACGAC
CAGCGTGCATAGCTACTTGCCAACTCGGTTACTGAGTCCCTGTGTGTCAGTGGTGCATGGATGCTACTG
TTGAGCCGAGTGGGCGACGACCTGCTGGTCTACCTGCTGTGCGACTGTGCGCTCTACCTGCTGGTCCCC
CCAGCTGTGCCTACCAGGTGTGCGGGTACCCCTGTACCAAAATTTGTGCCACCACGGATACCTGGTCCCT
TGTGCCCGCTGGTTACAGGCCACTCGACCCGTGGCGGGAATTTACTAACCTTGGGTCCGCACACCAG
ATCAAAAACAGTGGTACCAGGAAGCACAAAACCCAGGCCCTGCCATCACGAGGTACGAAGAGGCTTC
TGAGTCTACCAGTACAAACGTGCCTTACGTAAGAAGGCCAGGTTTGAACCTGCCCTGAGAGTGGATAA
GGGACCCACAGGCAGGTGGTACCAACCCATCAGGCAAAACATGGGCGCAAGTCTGTGCGTCCCCC
AAGGTGCCTCCTGCAGCGAAAACCTTGTCTTTGAAAGGAAAGGCATCTGACCCGAGTCTCTCTGGGTCCG
TGTGCTGTAACACAAGCCAGCTCCTCGTCCCTGCTGTGCATACCACCCCAAGATGCTGAAAAGCTCAG
GCCATTACTGAGACCAGACATTTCTTTACTCCAGGGGAGGTGGCAAGAGGAGCTAAATCCCTCATTC
CTACTCAACAGCCTCCCGCTAGCTTGACCGGGCCAGGAGACTGGTGGAGATCATCTTTCTGGGCTCAA
GGCCTAGGACATCAGGACCATTCTGCAGGACCCGCCCTGCCCGTGCATACTGGCAGATGCGACCCCT
ATTCAGCAGCTGCTCATGAACCACGCAAAGTGCATATGTGATTCCTCCGGTGCAGTGCAGATTT
CGAACAGCAAACAGCGGGTGGCGGATGCCATGGACACCAGCCATCCACCTCACGAGTTGCTCCGGT
TACACAGCAGCCCTGGCAGGTATACGGCTTCTTCGGGCTGCCCTCCGCGAGCTGGTGCCTGCCGTCT
CTGGGGCACAGGCACAATGAGCGCGCTTCTTAAGAAGCTGAAGAAGTTCATCTCGTTGGGGAAGTAC
GCCAAGCTATCCCTGCAGGAACTGATGTGGAGGTGAAAGTGGAGGACTGCCACTGGCTCCGCAGCAGCC
CAGAGAAGGACTGTCCCTGCCGCAGAGCACCCTCTGAGGGAGAGGATCCTTGCCATGTTCTGTTCTG
GCTAATGGACACATATGTGTTACAGCTGCTGAGGTCATTCTTCTACATCACAGAGACCACGTTCCAGAAG



AACCGCCTTTTCTCTACCGTAAGAGTGTGTGGAGCAAGCTGCAGAGCATTGGAATCAGGCAACAGCTTG
 AGAGAGTTCAGCTACGGAACTGT CACAAGAGGAGGTCAAGCATCACCAGGACACTTGGCTGGCCATGCC
 TATCTGCAGATTGCGCTTCATCCCCAAGCTCAATGGTCTCCGGCCATTGTGAACATGAGTTATGGCATG
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 TGCTCAACTACGAGCGGACCAACATCCTAACCTTATGGTGCTTCAGTACTGGGTACGAGTGACAGCTA
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 GCAGATGTGACAGGGCCATGATGCCATCCCCAGGACAAGCTCGTGGAAATTGTGCGCAATATAATCA
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 GCCCGCACACAGCTGCCTGCTCACTGCCTGTTCCCTGGTGTGGCTTACTGCTGGACACTCGGACTTTGG
 AAGTATCTGTGACTACTCAGGTTACGGACGGACCTCAATTAAGATGAGCCTCACCTCCAGGGTGTCTC
 CAGGGCCGGGAAGACCATGCGGTACAAGCTCTGTGAGTCTTGGCGTTGAAGTGTGATGGTCTGTTTCTA
 GACTTGCAGGTGAACAGCCTGCAGACAGTCTGCATCAATATATAAAGATCTTCTGCTTCAGGCCTACA
 GGTTCCATGCATGTGTGATTGCGCTTCCCTTTGGCCAGCATGTTAGGAAGAACCATGCATTCTTTCTGGG
 CATCATCTCAACCTAGCATCCTGCTGTACGCCATCCTGAAGGTCAAGAATCCAGGAGTGCCTAAGG
 GCCAAGGTGCCCTGGCTCCTTTCCGCCGAGGCCACACGTTGGCTCTGCTACCAAGCCTTCTGCTCA
 AGCTGGCTGCTCATTCTGTCACCTACAAGTGTCTCCTGGGACCTTTAGGACAGCCAAAAACAGCTGTG
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 CAGACCATTTTGGAC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RR210889 representing NM_053423
 Red=Cloning site Green=Tags(s)

MPRAPRCPAVRSLLRSRYREVWPLATFVRRRLGLEGSRLVQPGDPKVFRTLVAQCLVCPWGSQPPPADLS
 FHQVSSLKELVSRVVQKLCERGERNVLAFGFALLNGARGGPPMAFTTSVHSYLPNSVTESLCVSGAWMLL
 LSRVGGDLLVYLLSHCALYLLVPPSCAYQVCGSPLYQICATTTDTSVSPAGYRPTRPVGGNFTNLGSAHQ
 IKNSGHQEAPKPQALPSRGTKRLLSLTSTNVPSAKKARFEPALRVDKGPQRVPTPSGKTWAPSPAASP
 KVPPAAKNLSLKGKASDPSLSGSVCCCHKPSSSSLLSSPPQDAEKL RPF TETRHFLYSRGGQEELNPSF
 LLNSLPPSLTGARRLVEIIFLGSRPRTSGPFCTRRLPRRYWQMRPLFQQLLMNHAKCQYVRFRLSHCRF
 RTANQRVPDAMDTSPSHLTSLRLHSSPWQVYGFRLACLRELVPAGLWGTRHNERRFLKNVKKFISLGKY
 AKLSLQELMWRVKVEDCHWLRSPEKDTVPAAEHRLRERILAMFLFWLMDTYVVQLLRSFFYITETTFQK
 NRLFFYRKS VWSKLSIGIRQLERVLREL SQEEVKHHQDTWLAMPICRLRFIPKLNGLRPIVNM SYGM
 DTRAFGKKKQTQCFQSLKTLFVSVLN YERTKHPNLMGASVLGTSYRIWRTFVLRVRLDQTPRM YFVK
 ADVTGAYDAIPQDKLVEIVANIIRSESMYCI RQYAVVQKDSQGQVHKSFRQVSTLSDLQPYMGQFTKH
 LQSDASALRNSV VIEQSI SMNETGSLLHFFLRFVRHSVVKIDGRFYVQCQGI PQGSSLSTLLCSL CFG
 DMENKLF AEVQQDGLLLRFVDDFLLVPHLAHAKAFLSTLVHGVP EYGCINLQKTVVNFVETGALGGA
 APHQLPAHCLFPWCGLLLDTRTLEVFCDYSGYGR TSIKMSLTFQGVSRAGKTMRYKLLSVLR LKCHGLFL
 DLQVNSLQTV CINIYKIFLLQAYRFHACVIRL PFGQHVVRKNHAFFLGIISNLASCYAILKVKNPGVSLR
 AKGAPGSFPPEATR WLCYQAFLLKLAHVS VTYKCLLGPLRTAQKQLCRKLP EATMTLLKTAADPALSTDF
 QTILD

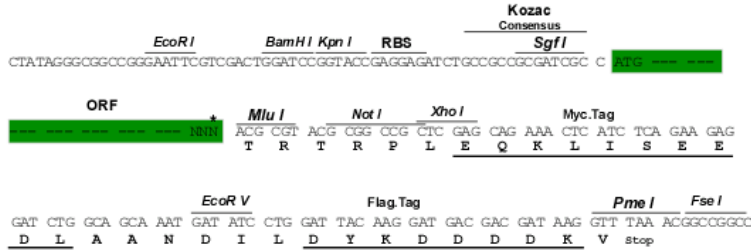
TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

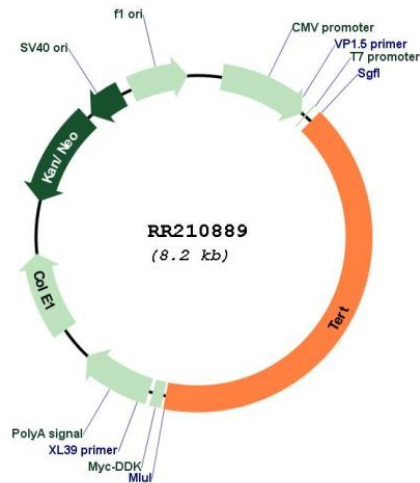
Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN: NM_053423

ORF Size: 3375 bp

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.

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_053423.1](#), [NP_445875.1](#)

RefSeq Size: 3378 bp

RefSeq ORF: 3378 bp

Locus ID: 301965

UniProt ID: [Q673L6](#)

Cytogenetics: 1p11

MW: 126.9 kDa

Gene Summary: Telomerase is a ribonucleoprotein enzyme essential for the replication of chromosome termini in most eukaryotes. Active in progenitor and cancer cells. Inactive, or very low activity, in normal somatic cells. Catalytic component of the telomerase holoenzyme complex whose main activity is the elongation of telomeres by acting as a reverse transcriptase that adds simple sequence repeats to chromosome ends by copying a template sequence within the RNA component of the enzyme. Catalyzes the RNA-dependent extension of 3'-chromosomal termini with the 6-nucleotide telomeric repeat unit, 5'-TTAGGG-3'. The catalytic cycle involves primer binding, primer extension and release of product once the template boundary has been reached or nascent product translocation followed by further extension. More active on substrates containing 2 or 3 telomeric repeats. Telomerase activity is regulated by a number of factors including telomerase complex-associated proteins, chaperones and polypeptide modifiers. Modulates Wnt signaling. Plays important roles in aging and antiapoptosis (By similarity).[UniProtKB/Swiss-Prot Function]