

Product datasheet for **MR226635**

Terf2 (NM_009353) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Terf2 (NM_009353) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Terf2
Synonyms:	TRF2
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide Sequence:

>MR226635 representing NM_009353
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCTGCGGGAGCCGGGACAGCGGGCCCTGCTTCCGGCCGGGGCTTGTGCGTGACCCGATGGCGTCAC
 AGCCAAGGAAACGGCCAGTCGGGAGGGCGGGGAGGGCGGGGAGGGCGAGCGGGCTCGAACACGATGGC
 GGGAGGAGGGCGGAGCAGCGATAGCAGCGGGCGGGCGGGAGCCGACGGGCATCGCGCAGCGGGCGGG
 GCTCGACGGGGCGACACGAGCCAGGGTTGGGAGGCGGGCGGAGCGGGCGGGGGAAGCTCGCCTGG
 AGGAGGGCGTCAACCGCTGGGTGCTCAAGTTCTATTTCCACGAGGCGCTGCGGGCCTTCGGAGTAGCCG
 GTACCGGGACTTCAGGCAGATCCGGGACATCATGCAGGCGTTGCTTGTGACGGCCCTTGGGAAGGAGCAT
 ACGGTGTCCCGTTGCTGCGGGTATGCAGTGTCTGTCGCGCATTGAAGAAGGAGAAAATTTAGACTGTT
 CCTTTGATATGGAGGCTGAGCTCACACCCTTGAATCAGCTATCAATGTGCTGGAGATGATTAACAGAG
 GTTCACACTGACAGACTCTATGGTTGAATCCAGCAGAAAAGTGGTCAAGGAGGCTGCTGTCATTATTTGT
 ATCAAAAAACAAAGAAATTTGAAAAGGCTTCAAAGATTTTAAAAAATACATGTCTAAGGACCCACAACCT
 AGAAGCTGAGAAGTATCTCTGAACATATCCGGGAAAAGAAGTGGCCACCCCTGTTATCCAGAAGT
 TTCTATGAGGTCTTCCAGCAGAAGATGCTGCGTTTCTAGAGAGCCACCTGGATGACACGGAGCCCTAC
 CTCCTCACGATGGCTAAAAAGCTTTGAAATCTGAATCAGCTGCTTCAAGTACAATGAGGGAAGAAAAGC
 ACCCAGAGCCAGTGAAAAACCCTTAGAGAGCCCTCAAGACAGCCTCAGAACCTCCAGCCACCATCGG
 GATCAGGACTCTGAAGGCAGCTTCAAAGCTCTGTCTACTGCACAAGACTCAGAGGCCGCTTTTGAAAA
 CTGGACCAGAAAGATCTGGTACTTGCTAATCTGGCATCCCATCATCACCAGCCACAACACAAGAGAC
 CCAGAAAGATGAACATGAAAGCGCAGCTCCTGCTGAGGGTGAAGGAGGCTCAGACCGGCAGCCAGGAA
 CAGTCCCATGACAATAAGCAGATTGCTGTTGGAGGAGACAGCCAGAGTACTGAGCCAGCCAGCCAGGCTC
 AACTCCTCCACAAAGCCATGTCAGCATCCAAGCCAGAGCTCTCAACCAACCCACCCGGGGGAGAAGA
 AGCCAAAGCATCCAAGACAAGTGAACAGCCCTAACGGGCTTGAAGAAAAGGAAGTTTGGTTGGAAGA
 GGACCAGCTGTTTGAAGTTCAGGCACCAGGTGAAGACAGGTATCCAGTTTAAACAAGAAAGCAGAAGTGG
 ACCATAGAAGAAAGCGAGTGGGTGAAGGATGGAGTGCAGCAATACGGGAAAGGAAACTGGGCTGCCATTT
 CTAAGTATACCCTTTGTCAACCGAACAGCTGTGATGATTAAGACCGCTGGCGGACCATGAAAAAAGT
 TGGCATGAAC

ACGCGTACGCGGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR226635 representing NM_009353
 Red=Cloning site Green=Tags(s)

MAAGAGTAGPASGPGVVRDPMASQPRKRPSREGGEGGEGERRSNTMAGGGSSDSSGRAASRRASRSGGR
 ARRRRHEPGLGGAAERGAGEARLEEAVNRWVKFYFHEALRAFRRSRYRDFRQIRDIMQALLVRPLGKEH
 TVSRLLRVMQCLSRIEEENLDCSFDMEAELETPLESAINVLEMIKTEFTLTDSMVESSRKLKVEAAVVIC
 IKNKEFEKASKILKYMSPDPTTQKLRTDLLNIREKNLAHPVIQNF SYEVFQQKMLRFLESHLDDTEPY
 LLTMAKKALKSESAASSTMREEKHPEPVEKPLREPPRQPQNPATIGIRTLKAAFALSTAQDSEAAFAK
 LDQKDLVLANLSPSSPAHKHKRPRKDEHESAAPAEEGGSDRQPRNSPMTISRLLLEEDSQSTEPSPL
 NSSHKAMSASKPRALNQPHPGEEKPKASKDKWNSPNGLEEKEVWLEEDQLFEVQAPGEDRSSSLTRKQKW
 TIEESEWVKDGVRYGEGNWAAISKSYFPVNRATAVMIKDRWRMTMCKLGMN

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

ACCN:	NM_009353
ORF Size:	1620 bp
OTI Disclaimer:	<p>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.</p> <p>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</p>
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:	<ol style="list-style-type: none"> 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_009353.2 , NP_033379.2
RefSeq Size:	2664 bp
RefSeq ORF:	1623 bp
Locus ID:	21750
Cytogenetics:	8 53.59 cM
MW:	60.6 kDa

Gene Summary:

Binds the telomeric double-stranded 5'-TTAGGG-3' repeat and plays a central role in telomere maintenance and protection against end-to-end fusion of chromosomes. In addition to its telomeric DNA-binding role, required to recruit a number of factors and enzymes required for telomere protection, including the shelterin complex, TERF2IP/RAP1 and DCLRE1B/Apollo. Component of the shelterin complex (telosome) that is involved in the regulation of telomere length and protection. Shelterin associates with arrays of double-stranded 5'-TTAGGG-3' repeats added by telomerase and protects chromosome ends; without its protective activity, telomeres are no longer hidden from the DNA damage surveillance and chromosome ends are inappropriately processed by DNA repair pathways. Together with DCLRE1B/Apollo, plays a key role in telomeric loop (T loop) formation by generating 3' single-stranded overhang at the leading end telomeres: T loops have been proposed to protect chromosome ends from degradation and repair. Required both to recruit DCLRE1B/Apollo to telomeres and activate the exonuclease activity of DCLRE1B/Apollo. Preferentially binds to positive supercoiled DNA. Together with DCLRE1B/Apollo, required to control the amount of DNA topoisomerase (TOP1, TOP2A and TOP2B) needed for telomere replication during fork passage and prevent aberrant telomere topology. Recruits TERF2IP/RAP1 to telomeres, thereby participating in to repressing homology-directed repair (HDR), which can affect telomere length. [UniProtKB/Swiss-Prot Function]