

## Product datasheet for **MC227889**

### Terf2 (NM\_001286200) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Terf2 (NM_001286200) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Terf2
Synonyms:	TRF2
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**Fully Sequenced ORF:** >MC227889 representing NM\_001286200  
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGCATCGC**C

ATGGCTGCGGGAGCCGGGACAGCGGGCCCTGCTTCCGGCCGGGGCTTGTGCGTGACCCGATGGCGTCAC  
AGCCAAGGAAACGGCCAGTCGGGAGGGCGGGGAGGGCGGGGAGGGCGAGCGGGTTCGAACACGATGGC  
GGGAGGAGGGCGGAGCAGCGATAGCAGCGGGCGGGCGGCGAGCCGACGGGCATCGCGCAGCGGGCGGG  
GCTCGACGGGGCGACACGAGCCAGGGTTGGGAGGCGCGGCCGAGCGGGCGCGGGGAAGCTCGCCTGG  
AGGAGGGCGTCAACCGCTGGGTGCTCAAGTTCTATTTCCACGAGGCGCTGCGGGCCTTTCGGAGTAGCCG  
GTACCGGGACTTCAGGCAGATCCGGGACATCATGCAGGCGTTGCTTGTGACGGCCCTTGGGAAGGAGCAT  
ACGGTGTCCCGTTGCTGCGGGTATGCAGTGTCTGTCGCGCATTGAAGAAGGAGAAAATTTAGACTGTT  
CCTTTGATATGGAGGCTGAGCTCACACCCTTGAATCAGCTATCAATGTGCTGGAGATGATTAACAGAA  
GTTACACTGACAGACTCTATGGTTGAATCCAGCAGAAAAGTGGTCAAGGAGGCTGCTGTCATTATTTGT  
ATCAAAAACAAAGAATTTGAAAAGGCTTCAAAGATTTTGAATAAATACATGTCTAAGGACCCCACTC  
AGAAGCTGAGAAGTATCTCTGAACATTATCCGGGAAAAGAAGTGGCCACCCCTGTTATCCAGAAGT  
TTCTATGAGGTCTTCCAGCAGAAGATGCTGCGTTTCTAGAGAGCCACCTGGATGACACGGAGCCCTAC  
CTCCTCACGATGGCTAAAAAGCTTTGAAATCTGAATCAGCTGCTTCAAGTACAATGAGGGAAGAAAAGC  
ACCCAGAGCCAGTGAAAAACCCTTAGAGAGCCCTCAAGACAGCCTCAGAACCTCCAGCCACCATCGG  
GATCAGGACTCTGAAGGCAGCTTCAAAGCTCTGTCTACTGCACAAGACTCAGAGGCCGCTTTTGCAAAA  
TTGAACATTGTGTAGTGAATCCCAAAGCATCAAAGACAAGTGGAAACAGCCCTAACGGGCTTGAAGAAAA  
GGAAGTTTGGTTGGAAGAGGACCAGCTGTTTGAAGTTCAGGCACCAAGTGAAGACAGGTCAATCCAGTTTA  
ACAAGAAAGCAGAAGTGACCATAGAAGAAAGCGAGTGGGTGAAGGATGGAGTGCACAAATACGGGGAAG  
GAAACTGGGCTGCCATTTCTAAAAGTTACCCCTTGTCAACCGAACAGCTGTGATGATTAAGACCGCTG  
GCGGACCATGAAAAAAGTGGCATGAAC**TGA**

**ACGCGT**ACGCGGCCGCTCGAGCAGAAAAGTCACTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** Sgfl-Mlul

**ACCN:** NM\_001286200

**Insert Size:** 1431 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).

**OTI Annotation:** Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.

**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\\_001286200.1](#), [NP\\_001273129.1](#)

**RefSeq Size:** 2472 bp

**RefSeq ORF:** 1431 bp

**Locus ID:** 21750

**UniProt ID:** [O35144](#)

**Cytogenetics:** 8 53.59 cM

**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 repressing homology-directed repair (HDR), which can affect telomere length.

[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (3) uses an alternate in-frame splice site and contains an alternate exon in the 3' coding region, compared to variant 1. This results in a shorter protein (isoform 3), compared to isoform 1.