

Product datasheet for **MG227318**

Dclre1b (NM_133865) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Dclre1b (NM_133865) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Dclre1b
Synonyms:	AI452214; Apollo; mSNM1B; SNMIB
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG227318 representing NM_133865
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCCGCATCGCC

ATGAACGGGGTCGTAATCCCCAAACGCCATTGCTGTGGACTTTTGAGCCTGCGCCGTGCCGGTTCGG
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 CCTCTACTGCTCTCCATCACTGCTTGCCTCTTGCATCGTCGCCTGCAGGTGTCTAAGCACTGGATCCGG
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 TCATAGATGCCAATCACTGCCCTGGTCTGTCTATGTTTCTTTGAAGGATACTTTGGAACAATTCTATA
 CACAGGTGATTTTCGATATACACCATCCATGCTGAAGGAACCTGCTCTGATACTGGGGAACAGATTCAT
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 CCAGGAACCTCGACAAGCAAGTGAAAAACACCAGAGAGTACAGCGTAGCAGTCTGCAGTTCTGAGCCC
 GGTGGATGTTGGC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>MG227318 representing NM_133865
 Red=Cloning site Green=Tags(s)

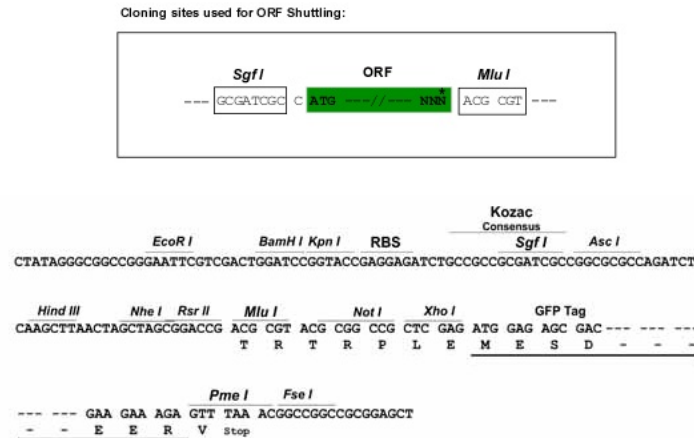
MNGVVIPQTPIAVDFWSLRRAGSARLFFLTHMCDHTVGLSSTWARPLYCSPITACLLHRRLLQVSKHWIR
 ALEVGESHVLPDEIGQETMTVTLIDANHCPGSMFLFEGYFGTILYTGFRTYTPSMLKEPALILGKQIH
 TLYLDNTNCPALVLPSPQEATQQIVQLIRQFPQHNIKIGLYSLGKESLLEQLALEFRTWVVLSPQRLEL
 VQLGLADVFTVEEEAGRIHAVDHTEICHSAQLQWNSHPTIAIFPTSRKVRSPHPSIYTPYSDHSSYS
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 QGVVFESPEEKANQVKVDRDSKKHKKENLSPWAGHLERLCPHPLQARKQLFPDFCRKERDEPVLFCDSNK
 MATVLTAPLEFSVQLQPIDFLFPETREKIGLESPLL SRGDSGSPARGNQSDCVGCGSPPAHISRAVPLT
 PESRGLALKYLLTPVHFLQAGFSSRNFDKQVEKHQRVQRSSPAVLSPVDVG

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



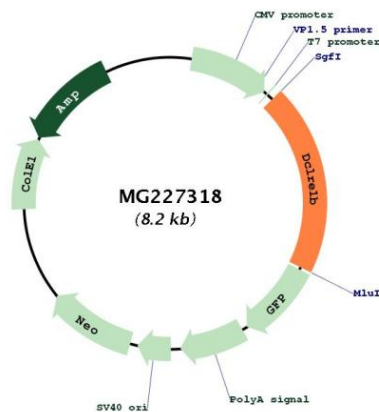
ACCN:	NM_133865
ORF Size:	1623 bp
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own 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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_133865.2 , NP_598626.2
RefSeq Size:	4309 bp
RefSeq ORF:	1626 bp
Locus ID:	140917

UniProt ID: [Q8C7W7](#)

Cytogenetics: 3 F2.2

Gene Summary: 5'-3' exonuclease that plays a central role in telomere maintenance and protection during S-phase. Participates in the protection of telomeres against non-homologous end-joining (NHEJ)-mediated repair, thereby ensuring that telomeres do not fuse. Plays a key role in telomeric loop (T loop) formation by being recruited by TERF2 at the leading end telomeres and by processing leading-end telomeres immediately after their replication via its exonuclease activity: generates 3' single-stranded overhang at the leading end telomeres avoiding blunt leading-end telomeres that are vulnerable to end-joining reactions and expose the telomere end in a manner that activates the DNA repair pathways. Together with TERF2, required to protect telomeres from replicative damage during replication by controlling the amount of DNA topoisomerase (TOP1, TOP2A and TOP2B) needed for telomere replication during fork passage and prevent aberrant telomere topology. Also involved in response to DNA damage: plays a role in response to DNA interstrand cross-links (ICLs) by facilitating double-strand break formation. In case of spindle stress, involved in prophase checkpoint. [UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG227318