

Product datasheet for **RG227954**

CD133 (PROM1) (NM_001145852) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CD133 (PROM1) (NM_001145852) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	PROM1
Synonyms:	AC133; CD133; CORD12; MCDR2; MSTP061; PROML1; RP41; STGD4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide
Sequence:

>RG227954 representing NM_001145852
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGGCCCTCGTACTCGGCTCCCTGTTGCTGCTGGGGCTGTGCGGAACTCCTTTTCAGGAGGCGAGCCTT
CATCCACAGATGCTCCTAAGGCTTGAATTATGAATTGCCTGCAACAAATTATGAGACCCAAAGACTCCCA
TAAAGCTGGACCCATTGGCATTCTCTTTGAACTAGTGCATATCTTTCTCTATGTGGTACAGCCGCGTGAT
TTCCAGAAAGATACTTTGAGAAAATTCTTACAGAAGGCATATGAATCCAAAATTGATTATGACAAGATTG
TCTACTATGAAGCAGGGATTATTCTATGCTGTGCTCTGGGGCTGCTGTTATTATTCTGATGCCTCTGGT
GGGGTATTTCTTTGTATGTGTCGTTGCTGTAACAAATGTGGTGGAGAAATGCACCAGCGACAGAAGGAA
AATGGGCCCTTCCTGAGGAAATGCTTTGCAATCTCCCTGTTGGTGATTTGTATAATAAAGCATTGGCA
TCTTCTATGGTTTTGTGGCAAATCACCAGGTAAGAACCCGGATCAAAGGAGTCGGAAACTGGCAGATAG
CAATTTCAAGGACTTGCGAATCTCTTGAATGAACTCCAGAGCAAATCAAATATATATTGGCCAGTAC
AACACTACCAAGGACAAGGCGTTCACAGATCTGAACAGTATCAATTCAGTCTAGGAGGCGGAATCTTG
ACCGACTGAGACCCAACATCATCCCTGTTCTTGATGAGATTAAGTCCATGGCAACAGCGATCAAGGAGAC
CAAAGAGGCGTTGGAGAACATGAACAGCACCTTGAAGAGCTTGCACCAACAAAGTACACAGCTTAGCAGC
AGTCTGACCAGCGTGAAGACTAGCCTGCGGTATCTCTCAATGACCCTCTGTGCTTGGTGATCCATCAA
GTGAAACTGCAACAGCATCAGATTGTCTTAAGCCAGCTGAATAGCAACCCTGAACTGAGGCAGCTTCC
ACCCGTGGATGCAGAACTTGACAACGTTAATAACGTTCTTAGGACAGATTTGGATGGCCTGGTCCAACAG
GGCTATCAATCCCTTAATGATATACCTGACAGAGTACAACGCCAAACCAGACTGTCGTAGCAGGTATCA
AAAGGCTTTGAATCCATTGGTTCAGATATCGACAATGTAACCTCAGCGTCTTCCATTCAGGATAATA
CTCAGCATCTCTGTTTTATGTTAATAACACTGAAAGTTACATCCACAGAAATTTACCTACATTGGAAGAG
TATGATTCATACTGGTGGCTGGGTGGCCTGGTCTCTGCTCTCTGCTGACCCCTATCGTGATTTTTTACT
ACCTGGGCTTACTGTGTGGCGTGTGCGGCTATGACAGGCATGCCACCCGACCACCCGAGGCTGTGTCTC
CAACACCCGAGGCGTCTTCTCATGGTTGGAGTTGGATTAAGTTTCTCTTTTGTGGATATTGATGATC
ATTGTGGTTCTTACCTTTGTCTTTGGTCAAATGTGGAAAACTGATCTGTGAACCTTACACGAGCAAGG
AATTATCCGGGTTTTGGATACACCCTACTTACTAAATGAAGACTGGGAATACTATCTCTCTGGGAAGCT
ATTTAATAAATCAAAAAAAGCTCACTTTTGAACAAGTTTACAGTGACTGCAAAAAAATAGAGGCACT
TAGGGCACTCTTACCTGCAGAACAGCTTCAATATCAGTGAACATCTCAACATTAATGAGCATACTGGAA
GCATAAGCAGTGAATTGGAAGTCTGAAGTAAATCTTAATATCTTTCTGTTGGGTGCAGCAGGAAGAAA
AAACCTTCAGGATTTTGTGCTTGTGGAATAGACAGAATGAATTATGACAGCTACTTGGCTCAGACTGGT
AAATCCCCCGCAGGAGTGAATCTTTATCATTTGCATATGATCTAGAAGCAAAGCAAACAGTTTGGCCC
CAGGAAATTTGAGGAACTCCCTGAAAAGAGATGCACAACTATTAACAATTCACCAGCAACGAGTCTCT
TCCTATAGAACAATCACTGAGCACTCTATACCAAAGCGTCAAGATACTTCAACGCACAGGGAATGGATTG
TTGGAGAGAGTAACTAGGATTCTAGCTTCTCTGGATTTTGGCTCAGAACTTATCACAACAATACTTCTCT
CTGTTATTATTGAGGAACTAAGAAGTATGGGAGAACAATAATAGGATATTTTGAACATTATCTGCAGTG
GATCGAGTTCTCTATCAGTGAGAAAGTGGCATCGTGCAAACCTGTGCCACCCTCTAGATACTGCTGTT
GATGTCTTTCTGTAGCTACATTATCGACCCCTTGAATTTGTTTTGGTTTGGCATAGGAAAAGCTACTG
TATTTTTACTTCCGGCTCTAATTTTTGCGGTAATAACTGGCTAAGTACTATCGTCGAATGGATTTCGGAGGA
CGTGATGATGACCCATCACAACAT

ACGGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG227954 representing NM_001145852
Red=Cloning site Green=Tags(s)

MALVLGSLLLLGLCGNSFSGGQPSSTDAPKAWNYELPATNYETQDSHKAGPIGILFELVHIFLYVYVQPRD
FPEDTLRKFLQKAYESKIDYDKIVVYEAGIILCCVLGLLFIILMPLVGYFFCMCRCCNKCGGEMHQKQKE
NGPFLRKCF AISLLVICIIISIGIFYGFVANHQVRTRIKRSRKLADSNFKDLRLLNETPEQIKYILAQY
NTTKDKAFTDLNSINSVLGGGILDRLRPNIIPVLDEIKSMATAIKETKEALENMNSTLKSLHQSTQLSS
SLTSVKTSLRSSLNDPLCLVHPSETCNSIRLSLSQLNSNPELRQLPPVDAELDNVNNVLRDLDGLVQQ
GYQSLNDIPDRVQRQTTTIVVAGIKRVLNSIGSDIDNVTQRLPIQDILSAFVYVNNNTESYIHRNLPLEE
YDSYWWLGGVLICSLTLLIVIFYLGLLCGVCYDRHATPTTRGCVSNTGGVFLMVGVLGSLFCWILMI
IVVLTFFVGFANVEKLICEPYTSKELFRVLDTPYLLNEDWEYYLSGKLFNKSKMKLTFEQVYSDCKKNRGT
YGTLHLQNSFNISEHLNINEHTGSISSSELESKVNLFLLGAAGRKNLQDFAACGIDRMNYDSYLAQTG
KSPAGVNLFSFAYDLEAKANSLPPGNLRNSLRDAQTIKTIHQQRVLPVIEQSLSTLYQSVKILQRTGNGL
LERVTRILASLDFANF ITNNTSSVIIIEETKKGRTIIGYFEHYLQWIEFSISEKVASCKPVATALDTAV
DVFLCSYIIDPLNLFWFGIGKATVFLPALIFAVKLAKYRRMDESDVYDDPSQH

TRTRPLE - GFP Tag - V

Restriction Sites: Sgfl-MluI

Cloning Scheme:

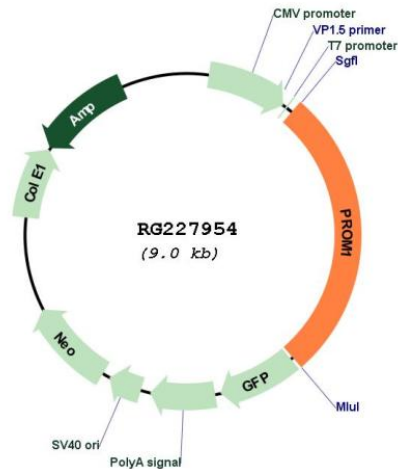
Cloning sites used for ORF Shutting:



EcoRI BamHI KpnI RBS Kozac Consensus SgfI AscI
 CTATAGGGCGGCCGGGAATTCGTGACTGGATCCGGTACCGAGSAGATCTGCCGCCGATCGCCGGCGCCAGATCT

 HindIII NheI RsrII MluI NotI XhoI GFP Tag
 CAAGCTTAACTAGCTAGCGGACCG ACG CGT ACG CGG CCG CTC GAG ATG GAG AGC GAC --- ---
 T R T R P L E M E S D - - -

 PmeI FseI
 --- GAA GAA AGA GTT TAA ACGGCCGGCCGGGAGCT
 - - E E R V Stop

Plasmid Map:


ACCN: NM_001145852

ORF Size: 2475 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_001145852.2](#)

RefSeq Size: 3857 bp

RefSeq ORF: 2478 bp

Locus ID: 8842

UniProt ID: [O43490](#)

Cytogenetics: 4p15.32

Protein Families: Druggable Genome, ES Cell Differentiation/IPS, Transmembrane

Gene Summary: This gene encodes a pentaspan transmembrane glycoprotein. The protein localizes to membrane protrusions and is often expressed on adult stem cells, where it is thought to function in maintaining stem cell properties by suppressing differentiation. Mutations in this gene have been shown to result in retinitis pigmentosa and Stargardt disease. Expression of this gene is also associated with several types of cancer. This gene is expressed from at least five alternative promoters that are expressed in a tissue-dependent manner. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Mar 2009]