

Product datasheet for **RG229863**

CD33 (NM_001177608) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CD33 (NM_001177608) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CD33
Synonyms:	p67; SIGLEC-3; SIGLEC3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG229863 representing NM_001177608 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCCGCTGCTGCTACTGCTGCCCTGCTGTGGGCAGGGGCCCTGGCTATGGATCCAAATTTCTGGCTGC
AAGTGCAGGAGTCAGTGACGGTACAGGAGGGTTTGTGCGTCCTCGTGCCCTGCACTTTCTCCATCCCAT
ACCCTACTACGACAAGAAGTCCCGAGTTCATGGTACTGGTTCGGGAAGGAGCCATTATATCCAGGGAC
TCTCCAGTGGCCACAAACAAGCTAGATCAAGAAGTACAGGAGGAGACTCAGGGCAGATTCGCGCTCCTTG
GGGATCCCAGTAGGAACAAGTCTCCCTGAGCATCGTAGACGCCAGGAGGAGGATAATGGTTCATACTT
CTTTCGGATGGAGAGAGGAAGTACCAAATACAGTTACAAATCTCCCCAGCTCTCTGTGCATGTGACAGAC
TTGACCCACAGGCCAAAATCCTCATCCCTGGCACTCTAGAACCAGGCCACTCCAAAAACCTGACCTGCT
CTGTGTCTGGGCTGTGAGCAGGGAACACCCCGATCTTCTCCTGGTTGTGAGCTGCCCCACCTCCCT
GGGCCCCAGGACTACTACTCCTCGGTGCTATAATCACCCACGGCCCCAGGACCACGGCACCAACCTG
ACCTGTCAGGTGAAGTTCGCTGGAGCTGGTGTGACTACGGAGAGAACCATCCAGCTCAACGTACCTATG
TTCCACAGAACCAACAAGTGGTATCTTCCAGGAGATGGCTCAGGGAACAAGAGACCAGAGCAGGAGT
GGTTCATGGGGCCATTGGAGGAGCTGGTGTACAGCCCTGCTCGCTCTTGTCTCTGCCTCATCTTCTTC
ATAGTGAAGACCCACAGGAGGAAAGCAGCCAGGACAGCAGTGGCAGGAATGACACCCACCCTACCACAG
GGTCAGCCTCCCGGTACGT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG229863 representing NM_001177608
 Red=Cloning site Green=Tags(s)

MPLLLLLPLWAGALAMPNFWLQVQESVTVQEGLCVLPCTFFHPIPYYDKNSPVHGYWFRGAIISR
 SPVATNKLDQEVQEETQGRFRLLDGPRNNSLSIVDARRRDNGSYFFRMRGSKYSYKSPQLSVHVT
 LTHRPKILIPGTLEPGHKNLTCVSWACEQGTPIFSWLSAAPTSLGPRTHSSVLIITPRPQDHGT
 NLTQVYKFAAGVTTERTIQLNVTYVPQNPTTGIFPGDGSKGQETRAGVVHGAIGGAGVTALLALCL
 CLIFFIVKTHRRKAARTAVGRNDTHPTTGSASPVR

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001177608

ORF Size: 930 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_001177608.2](#)

RefSeq Size: 1108 bp

RefSeq ORF: 933 bp

Locus ID: 945

UniProt ID: [P20138](#)

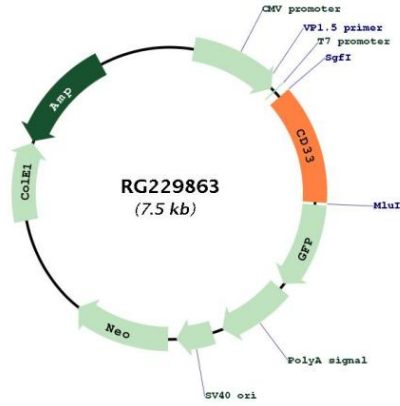
Cytogenetics: 19q13.41

Protein Families: Druggable Genome, Transmembrane

Protein Pathways: Hematopoietic cell lineage

Gene Summary: Sialic-acid-binding immunoglobulin-like lectin (Siglec) that plays a role in mediating cell-cell interactions and in maintaining immune cells in a resting state (PubMed:10611343, PubMed:15597323, PubMed:11320212). Preferentially recognizes and binds alpha-2,3- and more avidly alpha-2,6-linked sialic acid-bearing glycans (PubMed:7718872). Upon engagement of ligands such as C1q or sialylated glycoproteins, two immunoreceptor tyrosine-based inhibitory motifs (ITIMs) located in CD33 cytoplasmic tail are phosphorylated by Src-like kinases such as LCK (PubMed:28325905, PubMed:10887109). These phosphorylations provide docking sites for the recruitment and activation of protein-tyrosine phosphatases PTPN6/SHP-1 and PTPN11/SHP-2 (PubMed:10556798, PubMed:10206955, PubMed:10887109). In turn, these phosphatases regulate downstream pathways through dephosphorylation of signaling molecules (PubMed:10206955, PubMed:10887109). One of the repressive effect of CD33 on monocyte activation requires phosphoinositide 3-kinase/PI3K (PubMed:15597323). [UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RG229863