

## Product datasheet for **RC229863**

### CD33 (NM\_001177608) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	CD33 (NM_001177608) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CD33
Synonyms:	p67; SIGLEC-3; SIGLEC3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC229863 representing NM_001177608 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGCCGCTGCTGCTACTGCTGCCCTGCTGTGGGCAGGGGCCCTGGCTATGGATCCAAATTTCTGGCTGC  
AAGTGCAGGAGTCAGTGACGGTACAGGAGGGTTTGTGCGTCTCGTGCCCTGCACTTTCTCCATCCCAT  
ACCCTACTACGACAAGAAGTCCCGAGTTCATGGTACTGGTTCGGGAAGGAGCCATTATATCCAGGGAC  
TCTCCAGTGGCCACAAACAAGCTAGATCAAGAAGTACAGGAGGAGACTCAGGGCAGATTCGCGCTCTTG  
GGGATCCCAGTAGGAACAAGTCTCCCTGAGCATCGTAGACGCCAGGAGGAGGATAATGGTTCATACTT  
CTTTCGGATGGAGAGAGGAAGTACCAAATACAGTTACAAATCTCCCCAGCTCTCTGTGCATGTGACAGAC  
TTGACCCACAGGCCAAAATCCTCATCCCTGGCACTCTAGAACCAGGCCACTCCAAAAACCTGACCTGCT  
CTGTGTCTGGGCTGTGAGCAGGGAACACCCCGATCTTCTCCTGGTTGTGAGCTGCCCCACCTCCCT  
GGGCCCCAGGACTACTACTCCTCGGTGCTATAATCACCCACGGCCCCAGGACCACGGCACCAACCTG  
ACCTGTCAGGTGAAGTTCGCTGGAGCTGGTGTGACTACGGAGAGAACCATCCAGCTCAACGTACCTATG  
TTCCACAGAACCAACAAGTGGTATCTTCCAGGAGATGGCTCAGGGAACAAGAGACCAGAGCAGGAGT  
GGTTCATGGGGCCATTGGAGGAGCTGGTGTACAGCCCTGCTCGCTCTTGTCTGCTCATCTTCTTC  
ATAGTGAAGACCCACAGGAGGAAAGCAGCCAGGACAGCAGTGGCAGGAATGACACCCACCTACCACAG  
GGTCAGCCTCCCGGTACGT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC229863 representing NM\_001177608  
Red=Cloning site Green=Tags(s)

MPLLLLLPLLLWAGALAMPNFWLQVQESVTVQEGLCVLPCTFFHPIPYDYDKNSPVHGYWFREGAII SRD  
 SPVATNKLDQEVQEETQGRFRL LGDPSRNNCSLSIVDARRRDNGSYFFRMERGSTKYSYKSPQLSVHVTD  
 LTHRPKILIPGTLEPGHKNL TCSVSWACEQGTPIIFSWLSAAPTSLGPRTHSSVLIITPRPQDHGTNL  
 TCQVKFAGAGVTTERTIQLNVTYVPQNPTTGIFPGDGGSGKQETRAGVVHGAIGGAGVTALLALCLCLIFF  
 IVKTHRRKAARTAVGRNDTHPTTGSASPV R

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk8051\\_a09.zip](https://cdn.origene.com/chromatograms/mk8051_a09.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**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 ORF:** 933 bp

**Locus ID:** 945

**UniProt ID:** [P20138](#)

**Cytogenetics:** 19q13.41

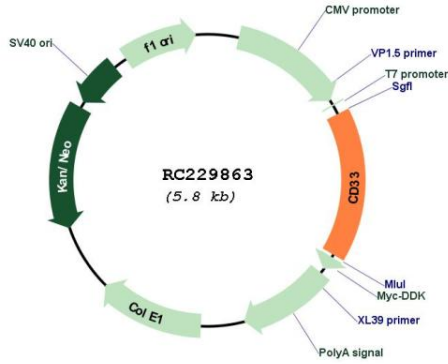
**Protein Families:** Druggable Genome, Transmembrane

**Protein Pathways:** Hematopoietic cell lineage

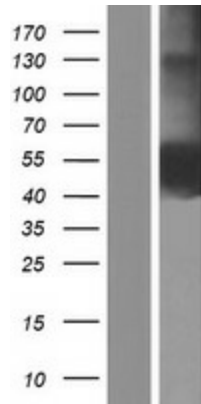
**MW:** 34.3 kDa

**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 RC229863



Western blot validation of overexpression lysate (Cat# [LY432863]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC229863 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).