

Product datasheet for **RC207023**

CD33 (NM_001772) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CD33 (NM_001772) 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:	>RC207023 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCCGCTGCTGCTACTGCTGCCCTGCTGTGGGCAGGGGCCCTGGCTATGGATCCAAATTTCTGGCTGC
AAGTGCAGGAGTCAGTGACGGTACAGGAGGTTTGTGCGTCTCGTGCCCTGCACTTTCTCCATCCCAT
ACCCTACTACGACAAGAAGTCCCGAGTTACGGTACTGGTTCGGGAAGGAGCCATTATATCCGGGGAC
TCTCCAGTGGCCACAAACAAGCTAGATCAAGAAGTACAGGAGGAGACTCAGGGCAGATTCGCCTCCTTG
GGGATCCCAGTAGGAACAAGTCCCTGAGCATCGTAGACGCCAGGAGGAGGATAATGGTTCATACTT
CTTTCGGATGGAGAGAGGAAGTACCAAATACAGTTACAAATCTCCCCAGCTCTCTGTGCATGTGACAGAC
TTGACCCACAGGCCAAAATCCTCATCCCTGGCACTCTAGAACCAGGCCACTCCAAAAACCTGACCTGCT
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GGGCCCCAGGACTACTACTCCTCGGTGCTATAATCACCCACGGCCCCAGGACCACGGCACCAACCTG
ACCTGTCAGGTGAAGTTCGCTGGAGCTGGTGTGACTACGGAGAGAACCATCCAGCTCAACGTACCTATG
TTCCACAGAACCAACAAGTGGTATCTTCCAGGAGATGGCTCAGGGAACAAGAGACCAGAGCAGGAGT
GGTTCATGGGGCATTGGAGGAGCTGGTGTACAGCCCTGCTCGCTCTTGTCTGCCTCATCTTCTTC
ATAGTGAAGACCCACAGGAGGAAAGCAGCCAGGACAGCAGTGGGCAGGAATGACACCCACCTACCACAG
GGTCAGCCTCCCCGAAACACCAGAAGAAGTCCAAGTTACATGGCCCCACTGAAACCTCAAGCTGTTCCAGG
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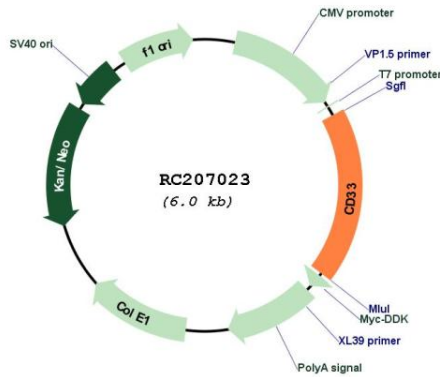
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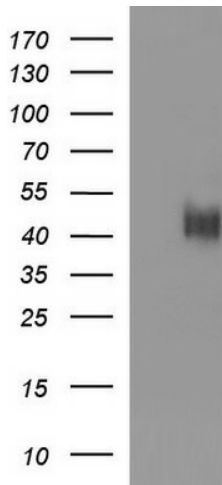
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Reconstitution Method:	<ol style="list-style-type: none">1. Centrifuge at 5,000xg for 5min.2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.3. Close the tube and incubate for 10 minutes at room temperature.4. Briefly vortex 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_001772.2 , NP_001763.2
RefSeq Size:	1466 bp
RefSeq ORF:	1095 bp
Locus ID:	945
UniProt ID:	P20138
Cytogenetics:	19q13.41
Protein Families:	Druggable Genome, Transmembrane
Protein Pathways:	Hematopoietic cell lineage
MW:	39.7 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]

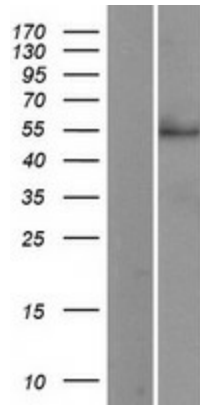
Product images:



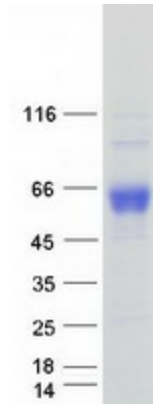
Circular map for RC207023



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY CD33 (Cat# RC207023, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-CD33(Cat# [TA506294]). Positive lysates [LY400667] (100ug) and [LC400667] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY400667]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207023 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CD33 protein (Cat# [TP307023]). The protein was produced from HEK293T cells transfected with CD33 cDNA clone (Cat# RC207023) using MegaTran 2.0 (Cat# [TT210002]).