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Product datasheet for RC217716

CD33 (NM_001082618) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CD33 (NM_001082618) 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:

>RC217716 representing NM_001082618
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCCGCTGCTGCTACTGCTGCCCCTGCTGTGGGCAGACTTGACCCACAGGCCCAAAATCCTCATCCCTG
GCACTCTAGAACCCGGCCACTCCAAAAACCTGACCTGCTCTGTGTCCTGGGCCTGTGAGCAGGGAACACC
CCCGATCTTCTCCTGGTTGTCAGCTGCCCCCACCTCCCTGGGCCCCAGGACTACTCACTCCTCGGTGCTC
ATAATCACCCCACGGCCCCAGGACCACGGCACCAACCTGACCTGTCAGGTGAAGTTCGCTGGAGCTGGTG
TGACTACGGAGAGAACCATCCAGCTCAACGTCACCTATGTTCCACAGAACCCAACAACTGGTATCTTTCC
AGGAGATGGCTCAGGGAAACAAGAGACCAGAGCAGGAGTGGTTCATGGGGCCATTGGAGGAGCTGGTGTT
ACAGCCCTGCTCGCTCTTTGTCTCTGCCTCATCTTCTTCATAGTGAAGACCCACAGGAGGAAAGCAGCCA
GGACAGCAGTGGGCAGGAATGACACCCACCCTACCACAGGGTCAGCCTCCCCGAAACACCAGAAGAAGTC
CAAGTTACATGGCCCCACTGAAACCTCAAGCTGTTCAGGTGCCGCCCCTACTGTGGAGATGGATGAGGAG
CTGCATTATGCTTCCCTCAACTTTCATGGGATGAATCCTTCCAAGGACACCTCCACCGAATACTCAGAGG
TCAGGACCCAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

View online »

Protein Sequence:

>RC217716 representing NM_001082618
Red=Cloning site Green=Tags(s)

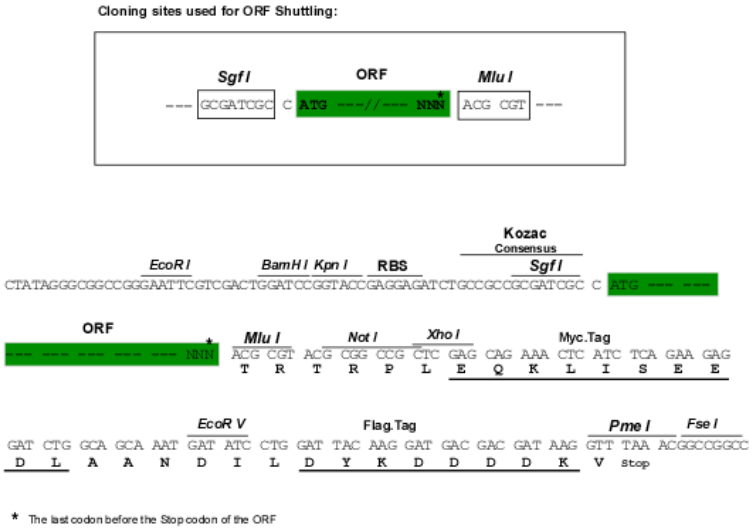
MPLLLLLPLLWADLTHRPKILIPGTLEPGHSKNLTCSVSWACEQGTPPIFSWLSAAPTSLGPRTTHSSVL
IITPRPQDHGTNLTCQVKFAGAGVTTERTIQLNVTYVPQNPTTGIFPGDGSGKQETRAGVVHGAIGGAGV
TALLALCLCLIFFIVKTHRRKAARTAVGRNDTHPTTGSASPKHQKKSKLHGPTETSSCSGAAPTVEMDEE
LHYASLNFHGMNPSKDTSTEYSEVRTQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/ja1639_e07.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001082618

ORF Size: 711 bp

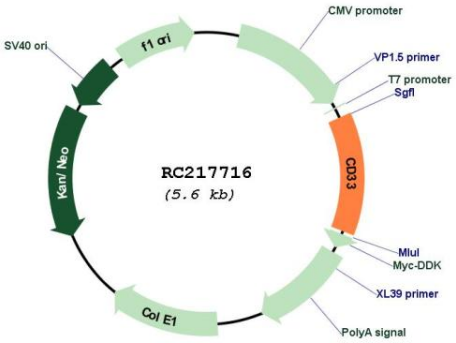
OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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

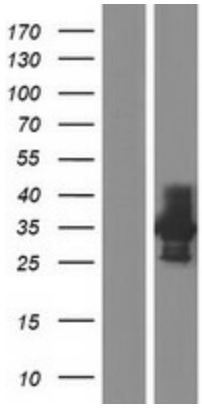
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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_001082618.2
RefSeq Size:	1085 bp
RefSeq ORF:	714 bp
Locus ID:	945
UniProt ID:	P20138
Cytogenetics:	19q13.41
Protein Families:	Druggable Genome, Transmembrane
Protein Pathways:	Hematopoietic cell lineage
MW:	25.29 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 syalylated 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]

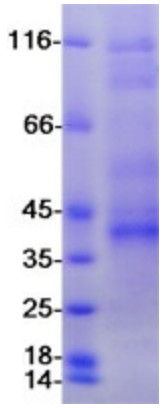
Product images:



Circular map for RC217716



Western blot validation of overexpression lysate (Cat# [LY421195]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC217716 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CD33 protein (Cat# [TP317716]). The protein was produced from HEK293T cells transfected with CD33 cDNA clone (Cat# RC217716) using MegaTran 2.0 (Cat# [TT210002]).