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Product datasheet for RC230267

CD19 (NM_001178098) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CD19 (NM_001178098) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CD19
Synonyms:	B4; CVID3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC230267 representing NM_001178098
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCCACCTCCTCGCCTCCTCTTCTTCCTCCTCTTCCTCACCCCCATGGAAGTCAGGCCCGAGGAACCTC
TAGTGGTGAAGGTGGAAGAGGGAGATAACGCTGTGCTGCAGTGCCTCAAGGGGACCTCAGATGGCCCCAC
TCAGCAGCTGACCTGGTCTCGGGAGTCCCCGCTTAAACCCTTCTTAAAACTCAGCCTGGGGCTGCCAGGC
CTGGGAATCCACATGAGGCCCCTGGCCATCTGGCTTTTCATCTTCAACGTCTCTCAACAGATGGGGGGCT
TCTACCTGTGCCAGCCGGGGCCCCCCTCTGAGAAGGCCTGGCAGCCTGGCTGGACAGTCAATGTGGAGGG
CAGCGGGGAGCTGTTCCGGTGGAATGTTTCGGACCTAGGTGGCCTGGGCTGTGGCCTGAAGAACAGGTCC
TCAGAGGGCCCCAGCTCCCCTTCCGGGAAGCTCATGAGCCCCAAGCTGTATGTGTGGGCCAAAGACCGCC
CTGAGATCTGGGAGGGAGAGCCTCCGTGTCTCCCACCGAGGGACAGCCTGAACCAGAGCCTCAGCCAGGA
CCTCACCATGGCCCCTGGCTCCACACTCTGGCTGTCCTGTGGGGTACCCCCTGACTCTGTGTCCAGGGGC
CCCCTCTCCTGGACCCATGTGCACCCCAAGGGGCCTAAGTCATTGCTGAGCCTAGAGCTGAAGGACGATC
GCCCGGCCAGAGATATGTGGGTAATGGAGACGGGTCTGTTGTTGCCCCGGGCCACAGCTCAAGACGCTGG
AAAGTATTATTGTCACCGTGGCAACCTGACCATGTCATTCCACCTGGAGATCACTGCTCGGCCAGTACTA
TGGCACTGGCTGCTGAGGACTGGTGGCTGGAAGGTCTCAGCTGTGACTTTGGCTTATCTGATCTTCTGCC
TGTGTTCCCTTGTGGGCATTCTTCATCTTCAAAGAGCCCTGGTCCTGAGGAGGAAAAGAAAGCGAATGAC
TGACCCCACCAGGAGATTCTTCAAAGTGACGCCTCCCCCAGGAAGCGGGCCCCAGAACCAGTACGGGAAC
GTGCTGTCTCTCCCCACACCCACCTCAGGCCTCGGACGCGCCCAGCGTTGGGCCGCAGGCCTGGGGGGCA
CTGCCCCGTCTTATGGAAACCCGAGCAGCGACGTCCAGGCGGATGGAGCCTTGGGGTCCCGGAGCCCGCC
GGGAGTGGGCCCAGAAGAAGAGGAAGGGGAGGGCTATGAGGAACCTGACAGTGAGGAGGACTCCGAGTTC
TATGAGAACGACTCCAACCTTGGGCAGGACCAGCTCTCCCAGGATGGCAGCGGCTACGAGAACCCTGAGG
ATGAGCCCCTGGGTCCTGAGGATGAAGACTCCTTCTCCAACGCTGAGTCTTATGAGAACGAGGATGAAGA
GCTGACCCAGCCGGTCGCCAGGACAATGGACTTCCTGAGCCCTCATGGGTCAGCCTGGGACCCCAGCCGG
GAAGCAACCTCCCTGGCAGGGTCCCAGTCCTATGAGGATATGAGAGGAATCCTGTATGCAGCCCCCCAGC
TCCGCTCCATTCGGGGCCAGCCTGGACCCAATCATGAGGAAGATGCAGACTCTTATGAGAACATGGATAA
TCCCGATGGGCCAGACCCAGCCTGGGGAGGAGGGGGCCGCATGGGCACCTGGAGCACCAGG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC230267 representing NM_001178098
Red=Cloning site Green=Tags(s)

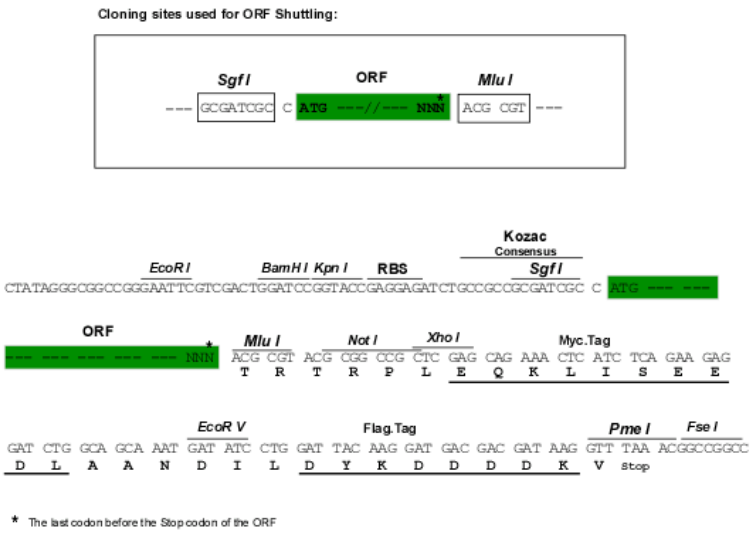
MPPPRLLFFLLFLTPMEVRPEEPLVVKVEEGDNAVLQCLKGTSDGPTQQLTWSRESPLKPFLKLSLGLPG
LGIHMRPLAIWLFIFNVSQQMGGFYLCQPGPPSEKAWQPGWTVNVEGSGELFRWNVSDLGGLGCGLKNRS
SEGPSSPSGKLMSPKLYVWAKDRPEIWEGEPPCLPPRDSLNQSLSQDLTMAPGSTLWLSCGVPPDSVSRG
PLSWTHVHPKGPKSLLSLELKDDRPARDMWVMETGLLLPRATAQDAGKYYCHRGNLTMSFHLEITARPVL
WHWLLRTGGWKVSAVTLAYLIFCLCSLVGILHLQRALVLRRKRKRMTDPTRRFFKVTPPPGSGPQNQYGN
VLSLPTPTSGLGRAQRWAAGLGGTAPSYGNPSSDVQADGALGSRSPPGVGPEEEEGEGYEEPDSEEDSEF
YENDSNLGQDQLSQDGSGYENPEDEPLGPEDEDSFSNAESYENEDEELTQPVARTMDFLSPHGSAWDPSR
EATSLAGSQSYEDMRGILYAAPQLRSIRGQPGPNHEEDADSYENMDNPDGPDPAWGGGGRMGTWSTR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/ja2415_h02.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001178098

ORF Size: 1671 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_001178098.2

RefSeq Size: 1968 bp

RefSeq ORF: 1674 bp

Locus ID: 930

UniProt ID: P15391

Cytogenetics: 16p11.2

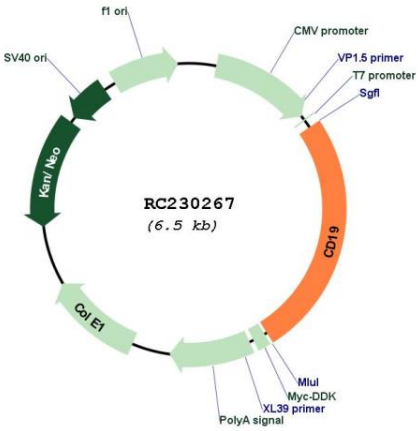
Protein Families: Druggable Genome, Transmembrane

Protein Pathways: B cell receptor signaling pathway, Hematopoietic cell lineage, Primary immunodeficiency

MW: 61.6 kDa

Gene Summary: This gene encodes a member of the immunoglobulin gene superfamily. Expression of this cell surface protein is restricted to B cell lymphocytes. This protein is a reliable marker for pre-B cells but its expression diminishes during terminal B cell differentiation in antibody secreting plasma cells. The protein has two N-terminal extracellular Ig-like domains separated by a non-Ig-like domain, a hydrophobic transmembrane domain, and a large C-terminal cytoplasmic domain. This protein forms a complex with several membrane proteins including complement receptor type 2 (CD21) and tetraspanin (CD81) and this complex reduces the threshold for antigen-initiated B cell activation. Activation of this B-cell antigen receptor complex activates the phosphatidylinositol 3-kinase signalling pathway and the subsequent release of intracellular stores of calcium ions. This protein is a target of chimeric antigen receptor (CAR) T-cells used in the treatment of lymphoblastic leukemia. Mutations in this gene are associated with the disease common variable immunodeficiency 3 (CVID3) which results in a failure of B-cell differentiation and impaired secretion of immunoglobulins. CVID3 is characterized by hypogammaglobulinemia, an inability to mount an antibody response to antigen, and recurrent bacterial infections. Alternative splicing results in multiple transcript variants encoding distinct isoforms. [provided by RefSeq, Jul 2020]

Product images:



Circular map for RC230267