

Product datasheet for **RG207890**

CD56 (NCAM1) (NM_181351) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CD56 (NCAM1) (NM_181351) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CD56
Synonyms:	CD56; MSK39; NCAM
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG207890 representing NM_181351
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGCTGCAAAC**T**AAGGATCTCATCTGGACTTTGTTTTCTGGAACTGCAGTTTCTCTGCAGTGGATA
 TTGTTCCAGCCAGGGGAGATCAGCGTTGGAGAGTCCAAATTCTTATGCCAAGTGGCAGGAGATGC
 CAAAGATAAAGACATCTCCTGGTTCTCCCCAATGGAGAAAAGCTCACCCCAAACAGCAGCGGATCTCA
 GTGGTGTGAATGATGATTCTCCTCCACCCTCACCATCTATAACGCCAACATCGACGACCGGCATTT
 ACAAGTGTGTGGTTACAGGCGAGGATGGCAGT**GAGT**CAGAGGCCACCGTCAACGTGAAGATCTTTCAGAA
 GCTCATGTTCAAGAATGCGCCAACCCACAGGAGTTCGGGAGGGGGAAGATGCCGTGATTGTGTGTGAT
 GTGGTCAGCTCCCTCCCAACCATCATCTGGAAACACAAGGCCGAGATGTCATCTGAAAAAAGATG
 TCCGATTCATAGTCTGTCCAACA**ACT**ACCTGCAGATCCGGGGCATCAAGAAAACAGATGAGGGC**ACTTA**
 TCGCTGTGAGGGCAGAATCCTGGCAGGGGGGAGATCAACTTCAAGGACATTCAGGT**CATT**GTGAATGTG
 CCACCTACCATCCAGGCCAGGCAGAATATTGTGAATGCCACCGCAACCTCGGCCAGTCCGT**CAC**CTGG
 TGTGCGATGCCGAAGGCTTCCCAGAGCCACCATGAGCTGGACAAGGATGGGGAACAGATAGAGCAAGA
 GGAAGACGATGAGAAGTACATCTTCAGCGACGATAGTTCCAGCTGACCATCAAAAAGGTGGATAAGAAC
 GACGAGGCTGAGTACATCTGCATTGCTGAGAACAAGGCTGGCGAGCAGGATGCGACCATCCACCTCAAAG
 TCTTTGCAAAACCCAAAATCACATATGTAGAGAACCAGACTGCCATGGAATTAGAGGAGCAGGTCACTCT
 TACCTGTGAAGCCTCCGGAGACCC**ATT**CCCTCCATCACCTGGAGACTTCTACCCGGAACATCAGCAGC
 GAAGAAAAGGCTTCGTGGACTCGACCAGAGAAGCAAGAGACTCTGGATGGGCACATGGTGGTGCAGTGC
 ATGCCCGTGTGTGTGCTGACCTGAAGAGCATCCAGTACACTGATGCCGGAGAGTACATCTGCACCGC
 CAGCAACACCATCGGCCAGGACTCCAGTCCATGTACCTTGAAGTGAATATGCCCAAAGCTACAGGGC
 CCTGTGGCTGTGTACTTGGGAGGGAAACCAGGTGAACATCACCTGCGAGGTATTTGCCTATCCAGTG
 CCACGATCTATGGTTTCGGGATGGCCAGCTGCTGCCAAGCTCCAATTACAGCAATATCAAGATCTACAA
 CACCCCTCTGCCAGCTATCTGGAGGTGACCCAGACTCTGAGAATGATTTTGGAACTACA**ACT**GTACT
 GCAGTGAACCGCATTGGGCAGGAGTCTTGAATTCATCCTTGTCAAGCAGACACCCCTCTTCCACAT
 CCATCGACCAGGTGGAGCCATACTCCAGCACAGCCAGGTGCAGTTT**GAT**GAACCAGAGGCCACAGGTGG
 GGTGCCATCCTCAAATACAAAGCTGAGTGGAGAGCAGTGGTGAAGAAGTATGGCATTCCAAGTGGTAT
 GATGCCAAGGAAGCCAGCATGGAGGGCATCGTCCACATCGTGGCCTGAAGCCC**AA**ACAACGTACGCCG
 TAAGGCTGGCGGCCTCAATGGCAAAGGCTGGGTGAGATCAGCGCGCC**TCC**GAGTTCAAGACCGAGCC
 AGTCCAAGGGAAACCCAGTGCACCTAAGCTCGAAGGGCAGATGGGAGAGGATGGAACTCTATTAAGTG
 AACCTGATCAAGCAGGATGACGGCGGCTCCCCATCAGACACTATCTGGT**CAG**GTACCGAGCGCTCTCCT
 CCGAGTGGAAAC**CAG**AGATCAGGCTCCCGTCTGGCAGTGACCACGTATGCTGAAGTCCCTGGACTGGAA
 TGCTGAGTATGAGGTCTACGTGGTGGCTGAGAACCAGCAAGGAAAATCCAAGGCGGCTC**ATTT**TGTGTT
 AGGACCTCGGCCAGCCACAGCCATCCAGCCAACGGCAGCC**CA**CTCAGGCTGAGCACCGGGCCCA
 TCGTGGGCATCCTCATCGT**CAT**CTTTCGTCTGCTCCTGGTGGTGTGGACATCACCTGCTACTTCTGAA
 CAAGTGTGGCCTGTT**CAT**GTGCATTGCGGTCAACCTGTGTGAAAAGCCGGGCCCGGGCCAAAGGGCAAG
 GACATGGAGGAGGCAAGGCCCTTCTCGAAAGATGAGTCCAAGGAGCC**AT**CGTGGAGGTT**CG**AACGG
 AGGAGGAGAGGCCCAAACCATGATGGAGGAAACACACAGAGCCAA**CAG**AGACCAGCCACTGACCGGA
 GCCCGAGAAGGGCCCGT**AGA**AGCAAAGCCAGAGT**GCC**AGGAGACAGAAACGAAGCCAGCGCCAGCCGAA
 GTCAAGACGGTCCCAATGACGCCACACAGACAAGGAGAA**CG**AGAA**CA**AGCA

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence: >RG207890 representing NM_181351
Red=Cloning site Green=Tags(s)

MLQTKDLIWTFLFLGTAVSLQVDIVPSQGEISVGESKFFLCQVAGDAKDKDISWFSPNGEKLTPNQQRIS
VWVNDSSSTLTIYNANIDDAGIYKCVVTGEDGSESEATVNVKIFQKLMFKNAPTPQEFREGEDAVIVCD
VVSSLPPTIIWKHKGRDVIKLDVRFIVLSNNYLQIRGIKKTDEGTYRCEGRILARGEINFKDIQVIVNV
PPTIQRQNIIVNATANLGQSVTLVCD AEGFPEPTMSWTKDGEQIEQEEDDEKYIFSDSSQLTIKKVDKN
DEAEYICIAENKAGEQDATIHLKVFAPKITYVENQTAMELEEQVTLTCEASGDPIPSITWRTSTRNISS
EEKASWTRPEKQETLDGHMVVRSHARVSSLTKSIQYTDAGEYICTASNTIGQDSQSMYLEVQYAPKLQG
PVAVYTWEGNQVNITCEVFAYPSATISWFRDGLLPSSNYSNIKIYNTPSASYLEVTPDSENDGNYNCT
AVNRIGQESLEFILVQADTPSSPSIDQVEPYSSTAQVQFDEPEATGGVPILKYKAEWRVAGEEVVHWSK
DAKEASMEGIVTIVGLKPETTYAVRLAALNGKGLGEISAASEFKTQPVGGEPSAPKLEGGMGEDGNSIKV
NLIKQDDGGSPIRHVLRVYRALSSEWKPEIRLPSGSDHVMLKSLDWNAEYEVVVAENQQGKSKAAHFVF
RTSAQPTAIPANGSPTSGLSTGAIVGILIVIFVLLL VVVDITCYFLNKCGLFMCIAVNLCGKAGPGAKGK
DMEEGKAASFKDESKEPIVEVRTEEERTPNHDGGKHTEPNETTPLTEPEKGPVEAKPECQETETKPAE
VKTVPNDATQTKENENKA

TRTRPLE - GFP Tag - V

Restriction Sites: Sgfl-Mlul

Cloning Scheme:


ACCN: NM_181351

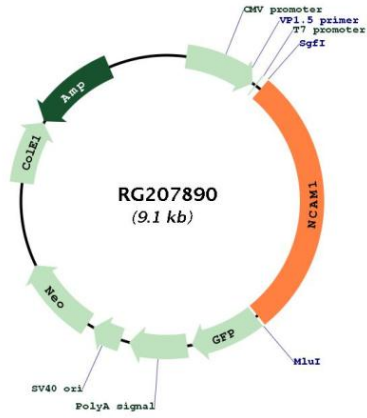
ORF Size: 2574 bp

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:	<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.
RefSeq:	<u>NM_181351.1</u> , <u>NP_851996.1</u>
RefSeq Size:	5981 bp
RefSeq ORF:	2577 bp
Locus ID:	4684
UniProt ID:	<u>P13591</u>
Cytogenetics:	11q23.2
Protein Families:	Druggable Genome, ES Cell Differentiation/IPS, Transmembrane
Protein Pathways:	Cell adhesion molecules (CAMs), Prion diseases
Gene Summary:	<p>This gene encodes a cell adhesion protein which is a member of the immunoglobulin superfamily. The encoded protein is involved in cell-to-cell interactions as well as cell-matrix interactions during development and differentiation. The encoded protein plays a role in the development of the nervous system by regulating neurogenesis, neurite outgrowth, and cell migration. This protein is also involved in the expansion of T lymphocytes, B lymphocytes and natural killer (NK) cells which play an important role in immune surveillance. This protein plays a role in signal transduction by interacting with fibroblast growth factor receptors, N-cadherin and other components of the extracellular matrix and by triggering signalling cascades involving FYN-focal adhesion kinase (FAK), mitogen-activated protein kinase (MAPK), and phosphatidylinositol 3-kinase (PI3K). One prominent isoform of this gene, cell surface molecule CD56, plays a role in several myeloproliferative disorders such as acute myeloid leukemia and differential expression of this gene is associated with differential disease progression. For example, increased expression of CD56 is correlated with lower survival in acute myeloid leukemia patients whereas increased severity of COVID-19 is correlated with decreased abundance of CD56-expressing NK cells in peripheral blood. Alternative splicing results in multiple transcript variants encoding distinct protein isoforms. [provided by RefSeq, Aug 2020]</p>

Product images:



Circular map for RG207890