

## Product datasheet for **RC207890**

### 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:	Myc-DDK
Symbol:	CD56
Synonyms:	CD56; MSK39; NCAM
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide  
Sequence:**

>RC207890 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGCTGCAAACAAAGGATCTCATCTGGACTTTGTTTTCTCTGGAACTGCAGTTTCTCTGCAGTGGATA  
 TTGTTCCAGCCAGGGGAGATCAGCGTTGGAGAGTCCAAATTCTTATGCCAAGTGGCAGGAGATGC  
 CAAAGATAAAGACATCTCCTGGTTCTCCCCAATGGAGAAAAGCTCACCCCAAACAGCAGCGGATCTCA  
 GTGGTGTGGAATGATGATTCTCCTCCACCCTCACCATCTATAACGCCAACATCGACGACCGGCATT  
 ACAAGTGTGTGGTTACAGGCGAGGATGGCAGTGAGTCAAGGCCACCGTCAACGTGAAGATCTTTCAGAA  
 GCTCATGTTCAAGAATGCGCCAACCCACAGGAGTTCGGGAGGGGGAAGATGCCGTGATTGTGTGTGAT  
 GTGGTCAGCTCCCTCCCAACCATCATCTGGAACACAAGGCCGAGATGTCATCTGAAAAAAGATG  
 TCCGATTCATAGTCTGTCCAACAACACTCTGCAGATCCGGGGCATCAAGAAAACAGATGAGGGCACTTA  
 TCGCTGTGAGGGCAGAATCCTGGCACGGGGGAGATCAACTTCAAGGACATTCAGGTGATTGTGAATGTG  
 CCACCTACCATCCAGGCCAGGCAGAATATTGTGAATGCCACCGCAACCTCGGCCAGTCCGTACCCCTGG  
 TGTGCGATGCCGAAGGCTTCCCAGAGCCACCATGAGCTGGACAAGGATGGGGAACAGATAGAGCAAGA  
 GGAAGACGATGAGAAGTACATCTTCAGCGACGATAGTTCCAGCTGACCATCAAAAAGGTGGATAAGAAC  
 GACGAGGCTGAGTACATCTGCATTGCTGAGAACAAGGCTGGCGAGCAGGATGCGACCATCCACCTCAAAG  
 TCTTTGCAAAAACCAAAATCACATATGTAGAGAACCAGACTGCCATGGAATTAGAGGAGCAGGTCACTCT  
 TACCTGTGAAGCCTCCGGAGACCCATTCCCTCCATCACCTGGAGGACTTCTACCCGGAACATCAGCAGC  
 GAAGAAAAGGCTTCGTGGACTCGACCAGAGAAGCAAGAGACTCTGGATGGGCACATGGTGGTGCAGTGC  
 ATGCCCGTGTGTGTGCTGACCTGAAGAGCATCCAGTACACTGATGCCGGAGAGTACATCTGCACCCG  
 CAGCAACACCATCGGCCAGGACTCCAGTCCATGTACCTTGAAGTGAATATGCCCAAAGCTACAGGGC  
 CCTGTGGCTGTGTACACTGGGAGGGGAACAGGTGAACATCACCTGCGAGGTATTTGCCTATCCCAGTG  
 CCACGATCTCATGGTTTCGGGATGGCCAGCTGCTGCCAAGCTCCAATTACAGCAATATCAAGATCTACAA  
 CACCCCTCTGCCAGCTATCTGGAGGTGACCCAGACTCTGAGAATGATTTGGGAACTACAAGTACT  
 GCAGTGAACCGCATTGGGCAGGAGTCTTGAATTCATCCTTGTCAAGCAGACACCCCTCTTCCACAT  
 CCATCGACCAGGTGGAGCCATACTCCAGCACAGCCAGGTGCAGTTTGTGAACAGAGGCCACAGGTGG  
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 AGTCCAAGGGGAACCCAGTGCACCTAAGCTCGAAGGGCAGATGGGAGAGGATGGAACCTCTATTAAGTG  
 AACCTGATCAAGCAGGATGACGGCGGCTCCCCATCAGACACTATCTGGTCAGGTACCGAGCGCTCTCCT  
 CCGAGTGGAAACAGAGATCAGGCTCCCGTCTGGCAGTGACCACGTATGCTGAAGTCCCTGGACTGGAA  
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 AGGACCTCGGCCAGCCACAGCCATCCAGCCAACGGCAGCCCCACCTCAGGCTGAGCACCAGGGGCCA  
 TCGTGGGCATCCTCATCGTCATCTTCTGCTGCTCCTGGTGGTTGTGGACATCACCTGCTACTTCTGAA  
 CAAGTGTGGCCTGTTTCATGTGCATTGCGGTCAACCTGTGTGAAAAGCCGGGCCCGGGCCAAAGGCAAG  
 GACATGGAGGAGGCAAGGCCGCTTCTCGAAAAGATGAGTCCAAGGAGCCCATCGTGGAGGTTTCAACGG  
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 GCCCGAGAAGGGCCCGTGAAGCAAAGCCAGAGTGCCAGGAGACAGAAAACGAAGCCAGCGCCAGCCGAA  
 GTCAAGACGGTCCCCAATGACGCCACACAGACAAAGGAGAACGAGAACAAGCA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC207890 protein sequence  
 Red=Cloning site Green=Tags(s)

MLQTKDLIWLFFLGTAVSLQVDIVPSQGEISVGESKFFLCQVAGDAKDKDISWFSPNGEKLTPNQQRIS  
 VVWDDSSSTLTIYNANIDDAGIYKCVVTGEDGSESEATVNVKIFQKLMFKNAPTQEFREGEDAVIVCD  
 VVSSLPPTIIWKHKGRDVLKDKDVRFIVLSNNYLQIRGIKKTDEGTYRCEGRILARGEINFKDIQVIVNV  
 PPTIARQNIIVNATANLQGSVTLVCDAEGFPEPTMSWTKDGEQIEQEEDDEKYIFSDSSQLTIKKVDKN  
 DEAEYICIAENKAGEQDATIHLKVFAPKPKITYVENQTAMELEEQVTLTCEASGDPISITWRTSTRNISS  
 EEKASWTRPEKQETLDGHMVVRSHARVSSLTKLSIQYTDAGEYICTASNTIGQDSQSMYLEVQYAPKLQG  
 PVAVYTWEGNQVNITCEVFAYPSATISWFRDGLLPSSNYSNIKIYNTPSASYLEVTPDSENDGNYNCT  
 AVNRIGQESLEFILVQADTPSSPSIDQVEPYSSTAQVQFDEPEATGGVPIKLYKAEWRVAGEEVVHWSKY  
 DAKEASMEGIVTIVGLKPETTYAVRLAALNGKGLGEISAASEFKTPVQGEPSAPKLEGGMGEDGNSIKV  
 NLIKQDDGGSPIRHYLVRYRALSSEWKPEIRLPSGSDHVMLKSLDWNAYEYVVAENQQGKSKAAHFVF  
 RTSAQPTAIPANGSPTSLSTGAIVGILIVIFVLLL VVVDITCYFLNKCGLFMCIAVNLCKGAGPGAKGK  
 DMEEGKAASFKDESKEPIVEVRTEEERTPNHDGGKHTEPNETTPLTEPEKGPVEAKPECQETETKPAPE  
 VKTVPNDATQTKENENKA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6343\\_h08.zip](https://cdn.origene.com/chromatograms/mk6343_h08.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:

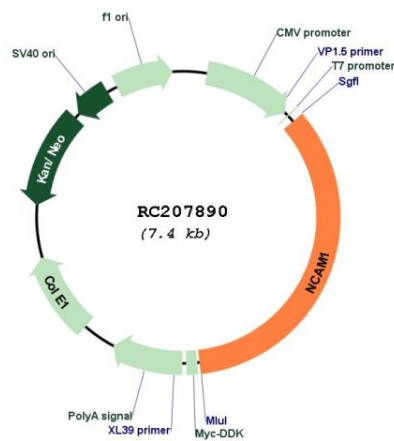


\* The last codon before the Stop codon of the ORF

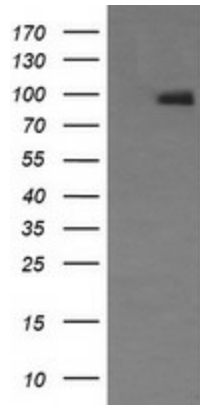
<b>ACCN:</b>	NM_181351
<b>ORF Size:</b>	2574 bp
<b>OTI Disclaimer:</b>	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability 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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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. <a href="#">More info</a></p>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<a href="#">NM_181351.1</a> , <a href="#">NP_851996.1</a>
<b>RefSeq Size:</b>	6007 bp
<b>RefSeq ORF:</b>	2577 bp
<b>Locus ID:</b>	4684
<b>UniProt ID:</b>	<a href="#">P13591</a>
<b>Cytogenetics:</b>	11q23.2
<b>Protein Families:</b>	Druggable Genome, ES Cell Differentiation/IPS, Transmembrane
<b>Protein Pathways:</b>	Cell adhesion molecules (CAMs), Prion diseases
<b>MW:</b>	94.6 kDa

**Gene Summary:**

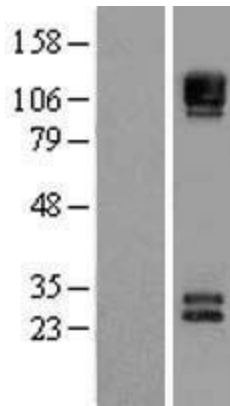
This gene encodes a cell adhesion protein which is a member of the immunoglobulin superfamily. The encoded protein is involved in cell-to-cell interactions as well as cell-matrix interactions during development and differentiation. The encoded protein plays a role in the development of the nervous system 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]

**Product images:**

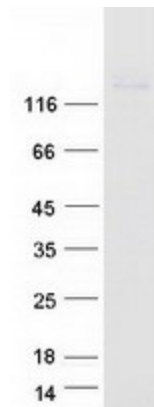
Circular map for RC207890



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY NCAM1 (Cat# RC207890, 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-NCAM1 (Cat# [TA506208]). Positive lysates [LY405745] (100ug) and [LC405745] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY405745]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207890 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified NCAM1 protein (Cat# [TP307890]). The protein was produced from HEK293T cells transfected with NCAM1 cDNA clone (Cat# RC207890) using MegaTran 2.0 (Cat# [TT210002]).