

Recombinant Human NCAM-1/CD56 Fc Chimera Protein, Insect Cells Derived

Information

Gene ID	
Accession #	
Alternate Names	
Source	Insect Cell
M.Wt	Approximately 104.7 kDa on SDS-PAGE under reducing conditions, containing 942 amino acids.
AA Sequence	AGMGMLQVDIVPSQGEISVGESKFFLCQVAGDAKDKDISWFSPNGEKLTPNQ QRISVVWNDDSSSTLTIYNANIDDAIYKCVVTGEDGSESEATVNVKIFQKLMF KNAPTPQEFREGEDAVIVCDVSSLPPTIWKHKGRDVILKCDVRFIVLSNNYL QIRGIKKTDEGTYRCEGRILARGEINFKDIQVIVNVPPTIQARQNVNATANLGQ SVTLVCDAEGFPEPTMSWTKDGEQIEQEEDDEKYIFSDDSSQLTIKKVDKND AEYICIAENKAGEQDATIHLKVFAPKITYVENQTAMELEEQVTLTCEASGDPI SITWRTSTRNISSEKASWTRPEKQETLDGHMVVRSHARVSSLTLKSIQYTDA GEYICTASNTIGQDSQSMYLEVQYAPKLQGPVAVYTWEGNQVNITCEVFAYP SATISWFRDQQLPSSNYSNIKIYNTPSASYLEVTPDSENDGNYNCTAVNRIG QESLEFILVQADTPSSPSIDQVEPYSSAQVQFDEPEATGGVPILKYKAEWRA VGEEVWHSKWYDAKEASMEGIVTIVGLKPETTYAVRLAALNGKGLGEISAASE FKTQPVQGEPSAPKLEGQMGEKGNSIKVNLKQDDGGSPIRHYLVRYRALSSE WKPEIRLPSGSDHVMLKSLDWNAAEYEVYVAENQQGKSKAAHFVFRSAQP TAIPANGSPTSGIEGRMDEPKSSDKTHTCPPCPAPEFEGAPSVFLFPPKPKDT LMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRV VSVLTVLHQDWLNGKEYKCKVSNKALPTPIEKTISKAKGQPREPQVYTLPPSR DELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSGGSFFLYS KLTVDKSRWQQGNVFCFSVMHEALHNHYTQKSLSLSPGK
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles - 12 months from date of receipt, -20 to -70 °C as supplied - 1 month, 2 to 8 °C under sterile conditions after reconstitution - 3 months, -20 to -70 °C under sterile conditions after reconstitution
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS, pH 7.0, with 5 % Trehalose, 0.02 % Tween-20.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.
Biological Activity	Testing in progress.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.

Usage

For Research Use Only! Not to be used in humans.

Components and Storage

Components	5µg	100µg	500µg
Recombinant Human NCAM-1/CD56 Fc Chimera Protein, Insect Cells Derived	5µg	100µg	500µg
Use a manual defrost freezer and avoid repeated freeze-thaw cycles - 12 months from date of receipt, -20 to -70 °C as supplied - 1 month, 2 to 8 °C under sterile conditions after reconstitution - 3 months, -20 to -70 °C under sterile conditions after reconstitution			

Quality Control

Purity	> 90 % by SDS-PAGE analyses.
Endotoxin	Less than 0.1 EU/µg of rHuNCAM-1/CD56-Fc as determined by LAL method.

Description

Neural cell adhesion molecule 1 (NCAM-1) is a multifunctional member of the Ig superfamily. It belongs to a family of membrane-bound glycoproteins that are involved in Ca⁺⁺ independent cell matrix and homophilic or heterophilic cell-cell interactions. NCAM-1 specifically binds to heparan sulfate proteoglycans, the extracellular matrix protein agrin, and several chondroitin sulfate proteoglycans that include neurocan and phosphocan. There are three main forms of human NCAM-1 that arise by alternate splicing. These are designated NCAM-120/NCAM-1 (761 amino acids [aa]), NCAM-140 (848 aa), and NCAM-180 (1120 aa). NCAM-120 is GPI-linked, while NCAM-140 and NCAM-180 are type I transmembrane glycoproteins. Additional alternate splicing adds considerable diversity to all three forms, and extracellular proteolytic processing is possible for NCAM-180. NCAM-1 is synthesized as a 761 aa preproprecursor that contains a 19 aa signal sequence, a 722 aa GPI-linked mature region, and a 20 aa C-terminal prosegment. The molecule contains five C-2 type Ig-like domains and two fibronectin type-III domains. Human to mouse, NCAM-1 is 93% aa identical. NCAM-1 appears to be highly sialylated. The polysialylation of NCAM-1 reduces its adhesive property and increases its neurite outgrowth promoting features. NCAM-1 in the adult brain shows a decline of sialylation relative to earlier developmental periods. In regions that retain a high degree of neuronal plasticity, however, the adult brain continues to express polysialylation-NCAM-1, suggesting sialylation of NCAM-1 is involved in regenerative processes and synaptic plasticity.

Reference



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