

Active Recombinant Human CD33 protein, His-Avi-tagged, Biotinylated

Cat. No. CD33-051H Lot. No. (See product label)

SPECIFICATION

Product Overview

Biotinylated Recombinant Human CD33(Met17-His259) protein, fused to his tag and Avi tag at the C-terminus, was expressed in CHO cells.

Species

Human

Source

CHO

ProteinLength

Met17-His259

Description

CD33 is I-type (Ig-type) lectins belonging to the Ig superfamily. They are characterized by an N-terminal Ig-like V-type domain which mediates sialic acid binding, followed by varying numbers of Ig-like C2-type domains (1, 2). Eleven human Siglecs have been cloned and characterized. They are sialoadhesin/CD169/Siglec-1, CD22/Siglec-2, CD33/Siglec-3, Myelin-Associated Glycoprotein (MAG/Siglec-4a) and Siglecs 5 to 11 (1-3). To date, no Siglec has been shown to recognized any cell surface ligand other than sialic acids, suggesting that interactions with glycans containing this carbohydrate are important in mediating the biological functions of Siglecs. Siglecs 5 to 11 share a high degree of sequence similarity with CD33/Siglec-3 both in their extracellular and intracellular regions. They are collectively referred to as CD33-related Siglecs. One remarkable feature of the CD33-related Siglecs is their differential expression pattern within the hematopoietic system (1, 2). This fact, together with the presence of two conserved immunoreceptor tyrosine-based inhibition motifs (ITIMs) in their cytoplasmic tails, suggests that CD33-related Siglecs

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

are involved in the regulation of cellular activation within the immune system. Human Siglec-3 is alternatively known as myeloid cell surface antigen CD33 and GP67. Human Siglec-3 cDNA encodes a 364 amino acid (aa) polypeptide with a hydrophobic signal peptide, an N-terminal Igl-like V-type domain, one Ig-like C2-type domains, a transmembrane region and a cytoplasmic tail (1, 4). Siglec-3 expression is restricted to cells of myelomonocytic lineage (2). It binds sialic acid preferring α 2,3-linkage over α 2,6-linkage (5). Studies indicated that Siglec-3 recruits SHP-1 and SHP-2 to its ITIMs (6, 7). When cocrosslinking with Fc γ R1, Siglec-3 inhibits tyrosine phosphorylation and calcium mobilization, suggesting Siglec-3 can mediate inhibitory signals (7).

Predicted N Terminal Met17

Form Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose.

Bio-activity Measured by its binding ability in a functional ELISA. When Human CD33 Antibody is immobilized at 0.5 μ g/mL (100 μ g/well), Biotinylated Recombinant Human CD33 His-tag Avi-tag binds with an ED50 of 60-360 ng/mL. Measured by the ability of the immobilized protein to support the adhesion of human red blood cel. The ED50 for this effect is 0.05-0.4 μ g/mL.
The ED50 for this effect is 0.05-0.4 μ g/mL.

Molecular Mass 45-52 kDa, under reducing conditions

Endotoxin <0.10 EU per 1 μ g of the protein by the LAL method.

Purity >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie[®] Blue Staining.

Applications Bioactivity

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

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.

Reconstitution Reconstitute at 500 µg/mL in PBS.

Conjugation Biotin

GENE INFORMATION

Gene Name CD33 CD33 molecule [Homo sapiens]

Official Symbol CD33

Synonyms CD33; CD33 molecule; CD33 antigen (gp67); myeloid cell surface antigen CD33; FLJ00391; p67; sialic acid binding Ig like lectin 3; SIGLEC 3; SIGLEC3; gp67; sialic acid binding Ig-like lectin 3; sialic acid-binding Ig-like lectin 3; SIGLEC-3;

Gene ID 945

mRNA Refseq NM_001082618

Protein Refseq NP_001076087

MIM 159590

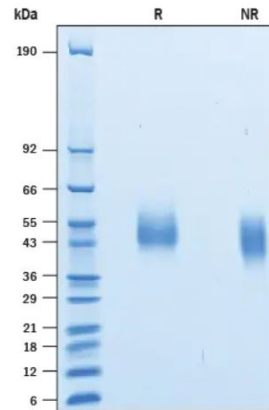
UniProt ID P20138

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

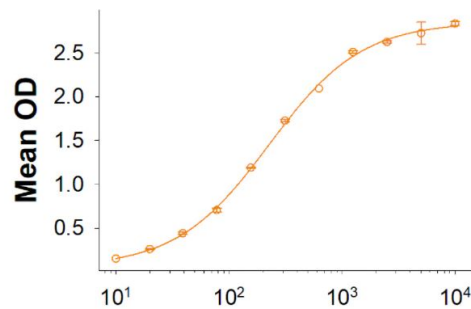
 45-1 Ramsey Road, Shirley, NY 11967, USA

SDS-PAGE



2 µg/lane Protein was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining.

Binding Activity



 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA