

# Recombinant Human CD33 Molecule, Fc Chimera

**Cat. No.** CD33-459H    **Lot. No.** (See product label)

## SPECIFICATION

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| <b>Product Overview</b>     | Recombinant Human Siglec-3 was fused to the Fc region of human IgG1 (aa 93-330). The chimeric protein was expressed in modified <i>human 293 cells</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Species</b>              | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Source</b>               | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Description</b>          | Siglecs (or sialic acid-binding immunoglobulin superfamily lectins) are sialic acid-binding Ig-like lectins characterized by a homologous N-terminal V-set Ig-like domain and varying numbers of C2-set Ig-like domains. In humans 11 Siglecs have been described. Siglec-3 (CD33) is the smallest Siglec, with only 2 of these C2-set Ig domains. Siglec-3 is a 67 kDa glycoprotein found predominantly on myeloid cells, including early myeloid precursors in the bone marrow and certain subsets of mature circulating myeloid cells. Siglec-3 has also been reported on dendritic cells, cord blood-derived natural killer (NK) cells, in vitro expanded T cells, and some biphenotypic leukemias. Siglec-3 was initially described as a marker for normal and leukemic myeloid progenitor cells, but has received renewed interest due to its demonstrated lectin activity for alpha 2-6 and alpha 2-3 sialylated N-linked oligosaccharides expressed on red blood cells (RBCs) and certain myeloid cells. |
| <b>Theoretical Sequence</b> | DPNFWLQVQESVTVQEG LCVLPCTFFHPIPYDKNS PVHGYWFREGAIISGDS P<br>VAT NKLD QEVQEETQG RFRL LGDPSRNNCSLSI VDARRRDNGSYFFRMERG S T<br>KYSYKSPQLSVH VTDLTHRPKILIPGTLE PGH SKNLTC SVSWA CE QG TPP IFS<br>WLSAA PTSLGPRTTHSSVLIITPR PQDHGTNLTCQVKFAGA GV TT ER TIQ LN VT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

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YV PQNPT TGIFPGD GSGKQETRAGVVH RSSNTKVDKKVEPKSCD KT HT CP PC  
PA PELLGG PSVFLFPPKPKDTLMI SRTPEVTCVVVDVSH EDPEVKFNWYVDGVE  
VH NAKTKPREEQYN STYRVVSVLTVLHQ DWLNGKEYKCKVS N KA LP AP IE KT  
IS KA KGQPREPQVYTLPSRDELTKNQVSL TCLVKGFYPSDIAV EW ESN GQ PE  
NN YKTTTPVLDSGD SFFLYSKLTVDKS RWQQGNVFSCSV MHEALHNHYTQK SL  
SLSPGK.

**Molecular Mass**

Siglec-3-Fc Chimera migrates as a broad band between 60 and 75 kDa on SDS-PAGE due to post-translation modifications, in particular glycosylation. This compares with the unmodified Siglec-3 - Fc Chimera that has a predicted molecular mass of 54 kDa.

**PI**

Siglec-3 -Fc Chimera separates into a number of glycoforms on 2D PAGE due to post-translational modifications, in particular glycosylation. The pI range is between 6.5 and 10. This compares with the unmodified Siglec-3 - Fc Chimera that has a predicted pI of 8.3.

**%Carbohydrate**

Siglec-3 - Fc Chimera consists of 10-30% carbohydrate by weight.

**Glycosylation**

Siglec-3 - Fc Chimera has N-linked and may have O-linked oligosaccharides.

**Purity**

>95%, as determined by SDS-PAGE and visualized by Coomassie Brilliant Blue.

**Formulation**

When reconstituted in 0.5 ml sterile phosphate-buffered saline, the solution will contain 1% human serum albumin (HSA) and 10% trehalose.

**Reconstitution**

It is recommended that 0.5 ml of sterile phosphate-buffered saline be added to the vial.

**Storage**

Lyophilized products should be stored at 2 to 8°C. Following reconstitution short-term

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storage at 4°C is recommended, with longer-term storage in aliquots at -18 to -20°C.

## GENE INFORMATION

|                     |                                                                                                                                                |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Gene Name           | CD33 CD33 molecule [ Homo sapiens ]                                                                                                            |
| Synonyms            | CD33 molecule; p67; SIGLEC3; FLJ00391; SIGLEC-3; CD33; CD33 antigen (gp67); CD33 antigen; gp67; Siglec-3; Sialic acid-binding Ig-like lectin 3 |
| Gene ID             | 945                                                                                                                                            |
| mRNA Refseq         | NM_001082618                                                                                                                                   |
| Protein Refseq      | NP_001076087                                                                                                                                   |
| MIM                 | 159590                                                                                                                                         |
| UniProt ID          | P20138                                                                                                                                         |
| Chromosome Location | 19q13.3                                                                                                                                        |
| Pathway             | Hematopoietic cell lineage                                                                                                                     |
| Function            | protein binding; receptor activity; sugar binding                                                                                              |

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