

# Human CD33 / Siglec-3 Protein (ECD,His Tag)



Sino Biological  
Biological Solution Specialist

Catalog Number: 12238-H08H

## General Information

### Gene Name Synonym:

p67; Siglec-3; SIGLEC3

### Protein Construction:

A DNA sequence encoding the human CD33 (AAH28152.1) (Met1-His259) was expressed with a C-terminal polyhistidine tag.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** ≥ 90 % as determined by SDS-PAGE ≥ 95 % as determined by SEC-HPLC.

### Bio Activity:

1. Immobilized Anti-CD33 Antibody (Lintuzumab), Human IgG1 at 2 µg/ml (100 µl/well) can bind Recombinant Human CD33 / Siglec-3 Protein (ECD,His Tag) (Cat: 12238-H08H), the EC50 is 1.5-6 ng/mL.  
2. Loaded anti-CD33 antibody on ProA Biosensor, can bind Recombinant Human Siglec-3/CD33 Protein, His Tag (Cat. No. 12238-H08H) with an affinity constant of 0.379 nM as determined in BLI assay (Sartorius Octet RED384) (Routinely tested).

### Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

**Predicted N terminal:** Asp 18

### Molecular Mass:

The recombinant human CD33 comprises 253 amino acids and has a predicted molecular mass of 28.2 kDa. The apparent molecular mass of the protein is approximately 40-46 kDa in SDS-PAGE under reducing conditions due to glycosylation.

### Formulation:

Lyophilized from sterile 10mM NaH<sub>2</sub>PO<sub>4</sub>, 2mM EDTA, 150mM NaCl, pH 7.2

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Stability & Storage:

Samples are stable for twelve months from date of receipt at -20°C to -80°C.

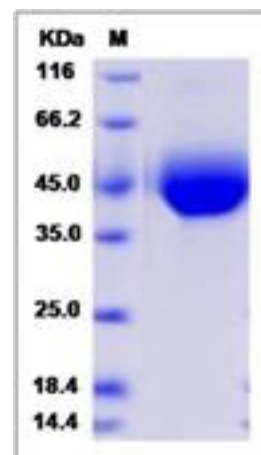
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

Myeloid cell surface antigen CD33 also known as Sialic acid binding Ig-like lectin 3, CD33 antigen or Siglec-3, is a member of the immunoglobulin superfamily and SIGLEC (sialic acid binding Ig-like lectin) family. This Single-pass type I membrane protein contains 1 Ig-like C2-type (immunoglobulin-like) domain and 1 Ig-like V-type (immunoglobulin-like) domain. CD33 /Siglec-3 is a putative adhesion molecule of myelomonocytic-derived cells that mediates sialic-acid dependent binding to cells. CD33 /Siglec-3 preferentially binds to alpha-2,6-linked sialic acid. The sialic acid recognition site may be masked by cis interactions with sialic acids on the same cell surface. In the immune response, may act as an inhibitory receptor upon ligand induced tyrosine phosphorylation by recruiting cytoplasmic phosphatase(s) via their SH2 domain(s) that block signal transduction through dephosphorylation of signaling molecules. CD33/Siglec-3 induces apoptosis in acute myeloid leukemia (in vitro). CD33/Siglec-3 can function as a sialic acid-dependent cell adhesion molecule and that binding can be modulated by endogenous sialoglycoconjugates when CD33 is expressed in a plasma membrane.

## References

1. Simmons D, et al. (1988) Isolation of a cDNA encoding CD33, a differentiation antigen of myeloid progenitor cells. J Immunol. 141(8): 2797-800.
2. Ulyanova T, et al. (1999) The sialoadhesin CD33 is a myeloid-specific inhibitory receptor. Eur J Immunol. 29(11): 3440-9.
3. Freeman SD, et al. (1995) Characterization of CD33 as a new member of the sialoadhesin family of cellular interaction molecules. Blood. 85(8): 2005-12.