# Biotinylated Human Siglec-3 / CD33 Protein, Avitag™, His Tag (MALS verified)

Catalog # CD3-H82E7



# Synonym

CD33,SIGLEC3,gp67

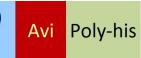
#### Source

Biotinylated Human Siglec-3, Avitag, His Tag(CD3-H82E7) is expressed from human 293 cells (HEK293). It contains AA Asp 18 - His 259 (Accession # AAH28152.1).

Predicted N-terminus: Asp 18

# **Molecular Characterization**

Siglec-3(Asp 18 - His 259) AAH28152.1



This protein carries an Avi tag (Avitag<sup>TM</sup>) at the C-terminus, followed by a polyhistidine tag.

The protein has a calculated MW of 29.4 kDa. The protein migrates as 45-55 kDa when calibrated against <u>Star Ribbon Pre-stained Protein Marker</u> under reducing (R) condition (SDS-PAGE) due to glycosylation.

## Labeling

Biotinylation of this product is performed using Avitag<sup>TM</sup> technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

#### **Protein Ratio**

Passed as determined by the HABA assay / binding ELISA.

## **Endotoxin**

Less than 0.1 EU per  $\mu g$  by the LAL method / rFC method.

## **Purity**

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

#### **Formulation**

Lyophilized from  $0.22~\mu m$  filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

#### Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

## **Storage**

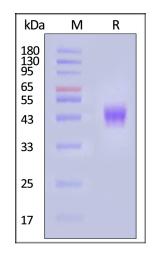
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

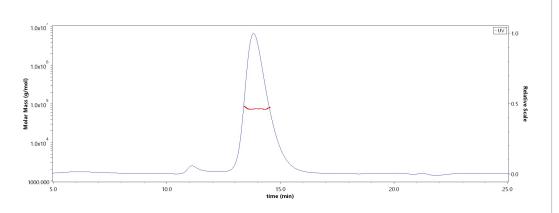
# **SDS-PAGE**



Biotinylated Human Siglec-3, Avitag, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With <u>Star Ribbon Pre-stained Protein Marker</u>).

# **Bioactivity-ELISA**



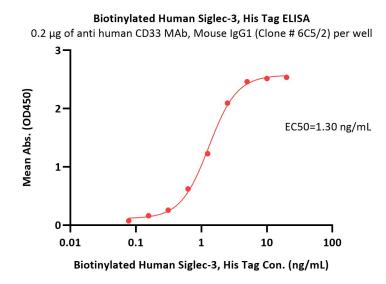


The purity of Biotinylated Human Siglec-3, Avitag, His Tag (Cat. No. CD3-H82E7) is more than 90% and the molecular weight of this protein is around 55-75 kDa verified by SEC-MALS.

Report

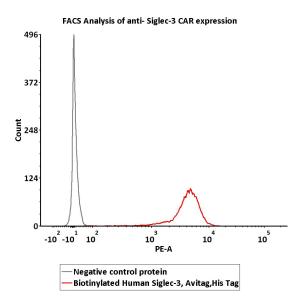






Immobilized anti human CD33 MAb, Mouse IgG1 (Clone # 6C5/2) at 2  $\mu$ g/mL (100  $\mu$ L/well) can bind Biotinylated Human Siglec-3, Avitag,His Tag (Cat. No. CD3-H82E7) with a linear range of 0.078-2.5 ng/mL (QC tested).

# **Bioactivity-FACS**



2e5 of anti-Siglec-3 CAR-293 cells were stained with 100  $\mu$ L of 3  $\mu$ g/mL of Human Siglec-3, Avitag,His Tag (Cat. No. CD3-H82E7) and negative control protein respectively, washed and then followed by PE-SA and analyzed with FACS (Routinely tested).

# **Background**

Myeloid cell surface antigen CD33 is also known as SIGLEC3, Siglecs (sialic acid binding Iglike lectins) and GP67, is a single-pass type I membrane protein which belongs to the immunoglobulin superfamily and SIGLEC (sialic acid binding Ig-like lectin) family. Human CD33 / Siglec-3 cDNA encodes a 364 amino acid (aa) polypeptide with a hydrophobic signal peptide, an N-terminal Ig-like V-type domain, one Ig-like C2-type domains, a transmembrane region and a cytoplasmic tail. CD33 / Siglec-3 usually considered myeloid-specific, but it can also be found on some lymphoid cells. In the immune response, CD33 / Siglec-3 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.

