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

Catalog # CD3-H82E7

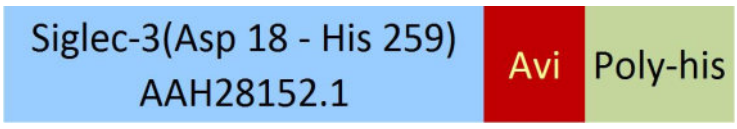
Synonym

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



This protein carries an Avi tag (Avitag™) 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 Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.

Labeling

Biotinylation of this product is performed using Avitag™ 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 μg by the LAL method.

Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 μm 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

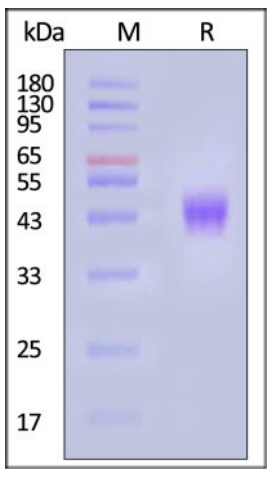
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

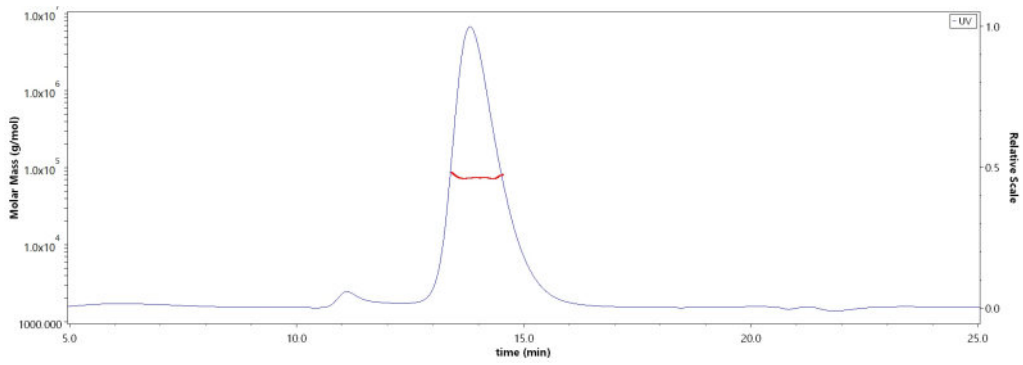
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



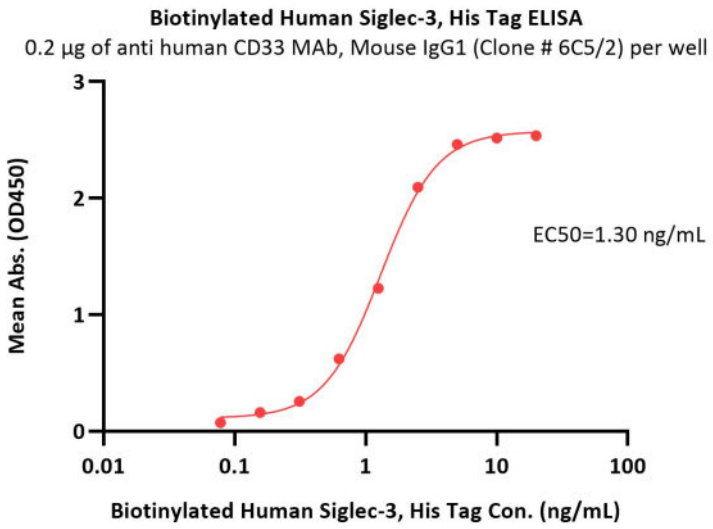
Biotinylated Human Siglec-3, Avitag,His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With Star Ribbon Pre-stained Protein Marker).

SEC-MALS



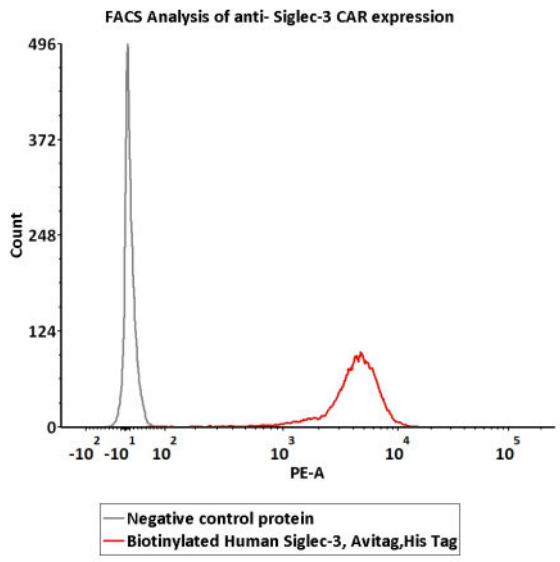
The purity of Biotinylated Human Siglec-3, Avitag,His Tag (Cat. No. CD3-H82E7) is more than 90% and the molecular weight of this protein is around 55-75 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA



Immobilized anti human CD33 MAb, Mouse IgG1 (Clone # 6C5/2) at 2 μg/mL (100 μL/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 μL of 3 μg/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.

Clinical and Translational Updates