APC-Labeled Human Siglec-3 / CD33 Protein, His TagStar Staining

Catalog # CD3-HA2H3

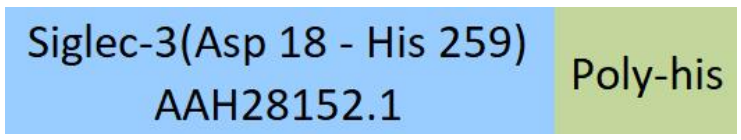
Synonym

CD33,SIGLEC3,gp67

Source

APC-Labeled Human Siglec-3 Protein, His Tag (CD3-HA2H3) is produced via conjugation of APC to Human Siglec-3 Protein, His Tag with a new generation site-specific technology under Star Staining labeling platform. Human Siglec-3 Protein, His Tag 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 a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 41.5 kDa.

Conjugate

APC

Excitation Wavelength: 640 nm

Emission Wavelength: 661 nm

Endotoxin

Less than 1.0 EU per μg by the LAL method.

Purity

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, 0.2% BSA, 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.

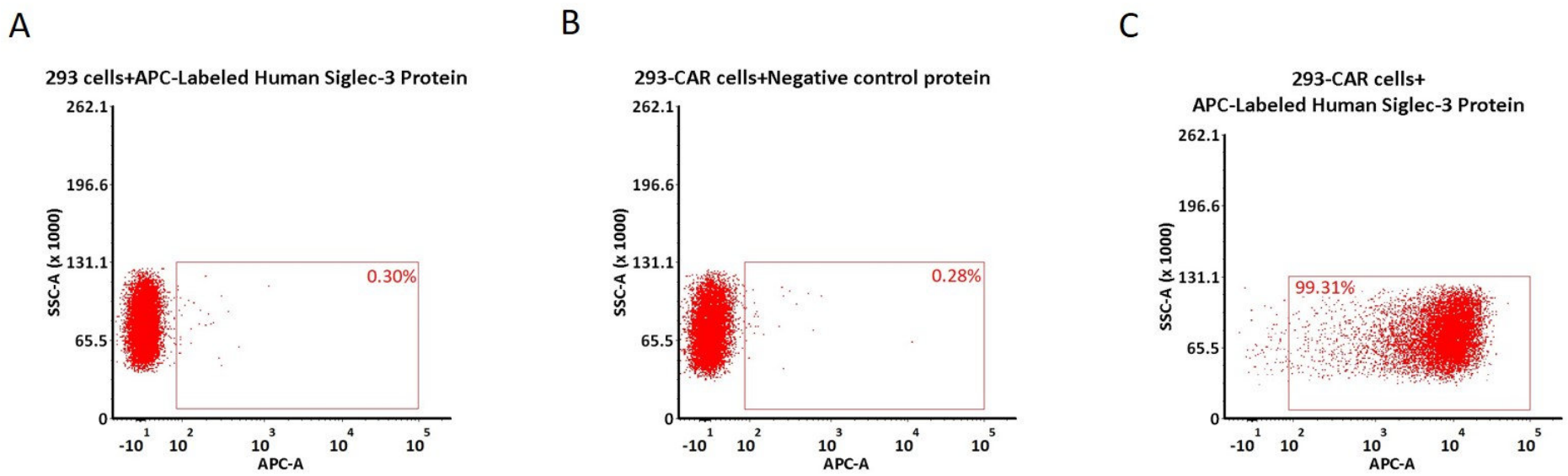
Please protect from light and avoid repeated freeze-thaw cycles.

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.

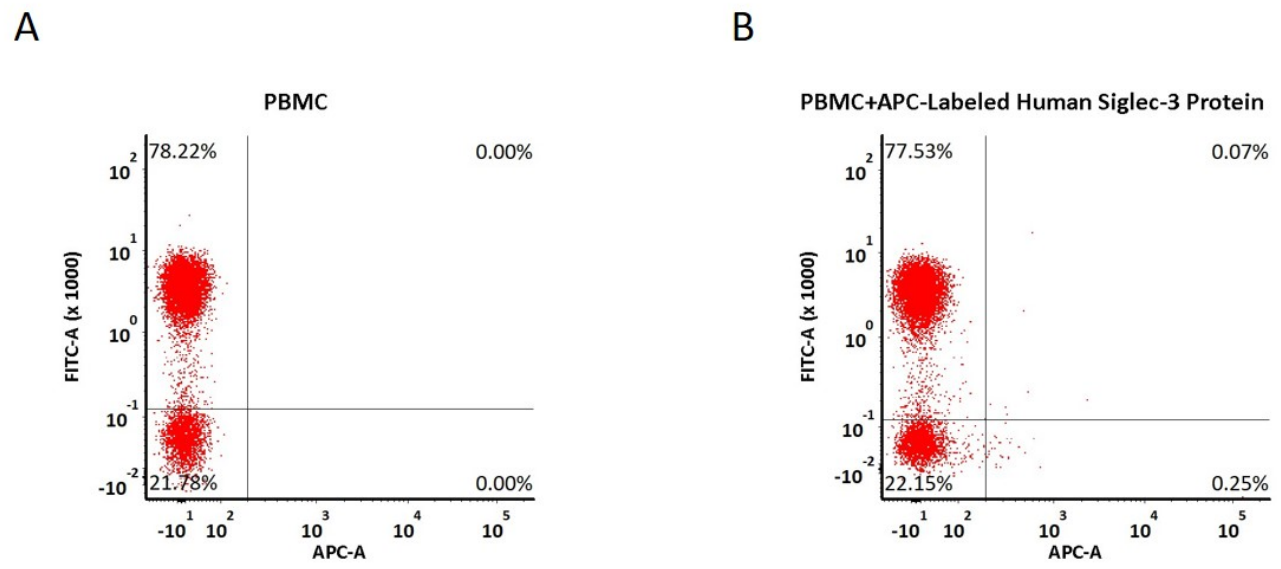
Evaluation of CAR expression

FACS Analysis of Anti-EGFRvIII CAR Expression



5e5 of anti-Siglec-3 CAR-293 cells were stained with 100 μL of 1:50 dilution (2 μL stock solution in 100 μL FACS buffer) of APC-Labeled Human Siglec-3 Protein, His Tag (Cat. No. CD3-HA2H3) and negative control protein respectively (Fig. C and B), and non-transfected 293 cells were used as a control (Fig. A). APC signal was used to evaluate the binding activity (QC tested).

FACS Analysis of Non-specific binding to PBMCs



5e5 of PBMCs were stained with APC-Labeled Human Siglec-3 Protein, His Tag (Cat. No. CD3-HA2H3) and anti-CD3 antibody, washed and then analyzed with FACS. FITC signal was used to evaluate the expression of CD3+ T cells in PBMCs, and APC signal was used to evaluate the non-specific binding activity to PBMCs (QC 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 cD 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