

## Datasheet

### Biotinylated Human Siglec-3 / CD33 Protein, Avi Tag (Avitag™)

Catalog # AMS.CD3-H82E7

For Research Use Only

#### Description

**Source** MABSol@Biotinylated Human Siglec-3 / CD33, 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

**Predicted N-terminus** Asp 18

#### Protein Structure



**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 on a SDS-PAGE gel under reducing (R) condition due to glycosylation.

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

**Biotin:Protein Ratio** The biotin to protein ratio is 0.5-1 as determined by the HABA assay.

**Endotoxin** Less than 1.0 EU per µg by the LAL method.

**Purity** >90% as determined by reduced SDS-PAGE.

#### Formulation and Storage

**Formulation** Lyophilized from 0.22 µm filtered solution in PBS, pH7.4. Normally trehalose is added as protectant before lyophilization. Contact us for customized product form or formulation.

**Reconstitution** Reconstitute at 100 µg/mL in sterile deionized water. 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.

No activity loss was observed after storage at:

- 4-8°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

#### Background

**Background** Myeloid cell surface antigen CD33 also known as SIGLEC3, Siglecs (sialic acid binding Ig-like 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.

#### References

- (1) Garnache-Ottou F., et al., 2005, Blood 105 (3): 1256-64.
- (2) Hernández-Caselles T, et al., 2006, J. Leukoc. Biol. 79 (1): 46-58.
- (3) Walter RB, et al., 2007, Blood 109 (10): 4168-70.
- (4) Ulyanova, T. et al., 1999, Eur. J. Immunol. 29:3440.
- (5) Crocker, P.R. and A. Varki, 2001, Immunology 103:137.

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# Datasheet

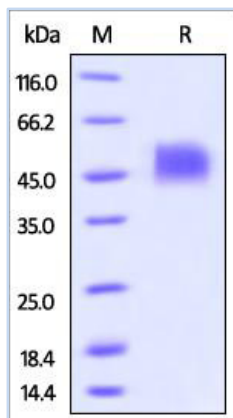
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### Assay Data

#### SDS-PAGE Data



Biotinylated Human Siglec-3 / CD33, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.

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