

## Biotin Human CD33 (C-Fc-Avi)

<b>Catalog Number:</b>	809503, 809504
<b>Size:</b>	25 ug, 100 ug
<b>Target Name:</b>	CD33, SIGLEC3, gp67
<b>Regulatory Status:</b>	RUO

### PRODUCT DETAILS

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<b>Application:</b>	ELISA, BLI
<b>Format:</b>	Liquid, Biotinylated
<b>Expression Host:</b>	CHO
<b>Species:</b>	Human
<b>Sources:</b>	Recombinant Human CD33 Protein (Asp18-His259) with C-terminus Fc-Avi-tag is expressed in CHO cell. This protein was site-specifically labeled with Biotin by BirA ligase.
<b>Accession Number:</b>	P20138
<b>Molecular Weight:</b>	The protein has a predicted molecular weight of 55.2 kDa. Under DTT-reducing conditions, it migrates at approximately 70-90 kDa on SDS-PAGE.
<b>Affinity Tag:</b>	C-Fc-Avi
<b>Purity:</b>	>95% based on SDS-PAGE under reducing condition
<b>Formulation:</b>	1xPBS buffer, pH7.4, 0.22 µm filtered
<b>Endotoxin level:</b>	Not tested
<b>Protein Concentration:</b>	25µg size is bottled at 0.2mg/mL concentration. 100 µg size is supplied at a lot-specific concentration.
<b>Storage and Handling:</b>	Briefly centrifuge the vial upon receipt. An unopened vial can be stored at 4°C for up to 2 weeks, or at -20°C or below for up to six months. The protein may be further diluted to 0.1 mg/mL using 0.22 µm-filtered PBS buffer (pH 7.4). For long-term storage, the diluted stock solution should be aliquoted and stored at ≤ -70°C to minimize freeze-thaw cycles. If additional dilution is required, carrier proteins such as FBS or BSA should be added to maintain protein stability.

### BACKGROUND INFORMATION

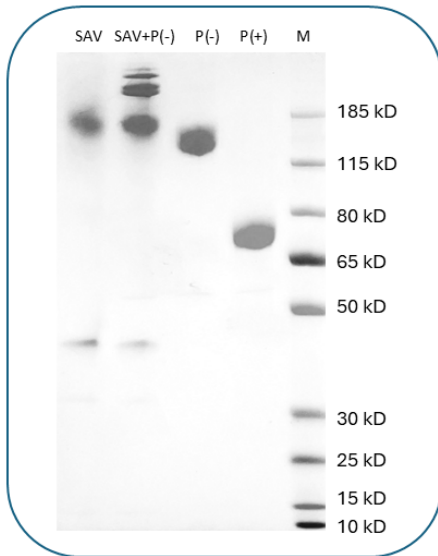
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CD33, also known as Siglec-3 or Sialic acid-binding Ig-like lectin 3, is a type I membrane glycoprotein and a member of the immunoglobulin superfamily. It contains one Ig-like V-type and one Ig-like C2-type domain. CD33 is primarily expressed on myelomonocytic cells, such as monocytes, granulocytes, and dendritic cells, where it functions as a sialic acid-dependent adhesion molecule. It preferentially binds to alpha-2,6-linked sialic acid on the surface of cells. In the immune response, CD33 acts as an inhibitory receptor. Upon ligand binding, it induces tyrosine phosphorylation and recruits phosphatases, which block signal transduction by dephosphorylating signaling molecules. This mechanism helps regulate immune activation. Additionally, CD33 is

implicated in inducing apoptosis in acute myeloid leukemia cells. CD33's function as an adhesion molecule is modulated by interactions with sialoglycoconjugates, influencing its role in cell adhesion. It plays an essential role in immune modulation and cell signaling, making it a critical target in immune response regulation and certain leukemia therapies.

## PRODUCT DATA

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Human CD33 Protein (C-Fc-Avi) was biotinylated in vitro using BirA ligase. SDS-PAGE analysis under non-reducing (P-) conditions shows the protein has a purity greater than 95%. A gel shift assay using co-incubation with streptavidin indicates that the biotinylation efficiency of the CD33 protein exceeds 90%.

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