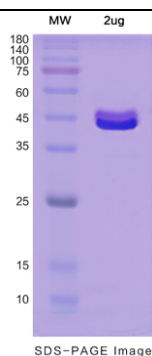


Product Details

Summary

English name	Recombinant Human CD33 protein ,C- His Tag
Purity	>90% as determined by SDS-PAGE
Endotoxin level	<1.0 EU per µg of the protein as determined by the LAL method.
Construction	A DNA sequence encoding the human CD33(Met1-His259) was fused with the C-terminal His Tag
Accession #	P20138
Host	Mammalian cells
Species	Homo sapiens (Human)
Predicted Molecular Mass	28.71kDa
Formulation	Supplied as solution form in PBS or lyophilized from PBS .
Shipping	In general, proteins are provided as lyophilized powder/frozen liquid. They are shipped out with dry ice/blue ice unless customers require otherwise.
Stability &Storage	Use a manual defrost freezer and avoid repeated freeze thaw cycles. Store at 2 to 8 °C for one week . Store at -20 to -80 °C for twelve months from the date of receipt.
Reconstitution	Reconstitute in sterile water for a stock solution.A copy of datasheet will be provided with the products, please refer to it for details.

SDS-PAGE image



Background

Background	Myeloid cell surface antigen CD33 is also known as SIGLEC3, Siglecs (sialic acid binding Ig-like lectins) and GP67, is a single-pass type I membrane protein which
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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.

Alternative Names

CD33,SIGLEC3,gp67

References

Chang, Nizet (2020) Siglecs at the Host-Pathogen Interface Advances in experimental medicine and biology 1204() 197-214

Frontier progress

Siglecs are sialic acid (Sia) recognizing immunoglobulin-like receptors expressed on the surface of all the major leukocyte lineages in mammals. Siglecs recognize ubiquitous Sia epitopes on various glycoconjugates in the cell glycocalyx and transduce signals to regulate immunological and inflammatory activities of these cells. The subset known as CD33-related Siglecs is principally inhibitory receptors that suppress leukocyte activation, and recent research has shown that a number of bacterial pathogens use Sia mimicry to engage these Siglecs as an immune evasion strategy. Conversely, Siglec-1 is a macrophage phagocytic receptor that engages GBS and other sialylated bacteria to promote effective phagocytosis and antigen presentation for the adaptive immune response, whereas certain viruses and parasites use Siglec-1 to gain entry to immune cells as a proximal step in the infectious process. Siglecs are positioned in crosstalk with other host innate immune sensing pathways to modulate the immune response to infection in complex ways. This chapter summarizes the current understanding of Siglecs at the host-pathogen interface, a field of study expanding in breadth and medical importance, and which provides potential targets for immune-based anti-infective strategies.