Data Sheet (Cat.No.TMPY-05366)

TargetMol

Siglec-3/CD33 Protein, Cynomolgus, Rhesus, Recombinant (His), Biotinylated

General Information

Synonyms:	CD33 molecule
Protein Construction:	A DNA sequence encoding the cynomolgus / rhesus CD33 (XP_005590138.1) (Met1-Gly248) was expressed with a polyhistidine tag at the C-terminus. Cynomolgus and Rhesus CD33 sequences are identical. The purified protein was biotinylated in vitro. Predicted N terminal: Met 16
Species:	Cynomolgus,Rhesus
Expression Host:	HEK293 Cells
Accession:	XP_005590138.1
Molecular Weight:	27.3 kDa (predicted)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Myeloid cell surface antigen CD33 also known as Sialic acid binding Ig-like lectin 3, CD33 antigen or Siglec-3, is a member of the immunoglobulin superfamily and SIGLEC (sialic acid binding Ig-like lectin) family. This Single-pass type I membrane protein contains 1 Ig-like C2-type (immunoglobulin-like) domain and 1 Ig-like V-type

(immunoglobulin-like) domain. CD33 /Siglec-3 is a putative adhesion molecule of myelomonocytic-derived cells that mediates sialic-acid dependent binding to cells. CD33 /Siglec-3 preferentially binds to alpha-2,6-linked sialic acid. The sialic acid recognition site may be masked by cis interactions with sialic acids on the same cell surface. In the immune response, 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 (in vitro). CD33/Siglec-3 can function as a sialic acid-dependent cell adhesion molecule and that binding can be modulated by endogenous sialoglycoconjugates when CD33 is expressed in a plasma membrane.Cancer ImmunotherapyImmune CheckpointImmunotherapyTargeted Therapy

Reference

Simmons D,et al.(1988) Isolation of a cDNA encoding CD33, a differentiation antigen of myeloid progenitor cells. J Immunol. 141(8): 2797-800.

Ulyanova T,et al.(1999) The sialoadhesin CD33 is a myeloid-specific inhibitory receptor. Eur J Immunol. 29(11): 3440-9.

Freeman SD,et al.(1995) Characterization of CD33 as a new member of the sialoadhesin family of cellular interaction molecules. Blood. 85(8): 2005-12.