Data Sheet (Cat.No.TMPJ-00370)

TargetMol

Siglec-10 Protein, Human, Recombinant (hFc & Avi), Biotinylated

General Information

Synonyms:	siglec-like gene 2;SLG2;sialic acid-binding Ig-like lectin 10;Siglec-like protein 2;MGC126774; Siglec-10;SLG2sialic acid binding Ig-like lectin 10 Ig-like lectin 7;PRO940;SIGLEC10
Protein Construction:	Met17-Thr546
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q96LC7
Molecular Weight:	100-130 KDa (reducing condition)
AA Sequence:	Met17-Thr546

QC Testing

Biological Activity:	1. Loaded Human Siglec-10-Fc-Avi on SA Biosensor, can bind Anti-Human Siglec-10 mAb-Fc with an affinity constant of <10⁻³ nM as determined in BLI assay. (Regularly tested) 2. Immobilized Anti-Human Siglec10 mAb at 1μg/ml (100 μl/well) can bind Biotinylated Human Siglec-10-Fc-Avi The ED50 of Biotinylated Human Siglec-10-Fc-Avi is 1.45 ng/ml. (Regularly tested)
Purity:	Greater than 95% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.1 ng/μg (1 EU/μg) as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

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

Siglecs (sialic acid binding Ig-like lectins) are I-type lectins that belong to the immunoglobulin superfamily. They are characterized by an N-terminal Ig-like V-type domain which mediates sialic acid binding, followed by a varying number of Ig-like C2-type domains. Siglecs 5-11 constitute the CD33/Siglec-3 related group, and are differentially expressed in the hematopoietic system. Siglec-G is the apparent ortholog of human Siglec-10. We describe here a novel member of the siglec protein family that shares a similar structure including five Ig-like domains, a transmembrane domain, and a cytoplasmic tail containing two ITIM-signaling motifs. Siglec-10 was identified through database mining of an asthmatic eosinophil EST library. Siglec-10 binds sialated proteins and lipids in alpha 2,3 or alpha 2,6 linkage and shows a preference for GT1b gangliosides. This binding can be modulated by cis interactions of Siglec-10 with sialated molecules expressed on the same cell. When tyrosine phosphorylated, the cytoplasmic ITIMs interact with phosphatases SHP-1 and SHP-2 to propagate inhibitory signals. The Siglec-10-VAP-1 interaction seems to mediate lymphocyte adhesion to endothelium and has the potential to modify the inflammatory microenvironment via the enzymatic end products.

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