

**DESCRIPTION**

<b>Source</b>	Mouse myeloma cell line, NS0-derived		
	Human Siglec-10 (Met17-Thr546) Accession # Q96LC7	IEGRMD	Human IgG <sub>1</sub> (Pro100-Lys330)
	N-terminus		C-terminus
<b>N-terminal Sequence Analysis</b>	Met17		
<b>Structure / Form</b>	Disulfide-linked heterodimer		
<b>Predicted Molecular Mass</b>	85 kDa (monomer)		

**SPECIFICATIONS**

<b>SDS-PAGE</b>	105-110 kDa, reducing conditions
<b>Activity</b>	Measured by its ability to bind biotinylated 6'-Sialyllactose-Polyacrylamide in functional ELISA. Whitney, G. <i>et al.</i> (2001) FEBS <b>268</b> :6083. rhSiglec-10/Fc Chimera immobilized at 5 µg/mL (100 µL/well) on a goat anti-human IgG Fc antibody (Catalog # G-102-C) coated plate can bind biotinylated 6'-Sialyllactose-Polyacrylamide with a linear range of 0.04-2.5 µg/mL.
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the protein by the LAL method.
<b>Purity</b>	>90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 100 µg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**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 (1-3). Siglec-G is the apparent ortholog of human Siglec-10 (4). The human Siglec-10 cDNA encodes a 697 amino acid (aa) precursor that includes a 16 aa signal sequence, a 534 aa extracellular domain (ECD), a 21 aa transmembrane segment, and a 126 aa cytoplasmic domain. The ECD contains one Ig-like V-type domain and four Ig-like C2-type domains, while the cytoplasmic domain contains two immunoreceptor tyrosine-based inhibitory motifs (ITIM) (5-8). Five splice variants of human Siglec-10 differ in their deletions within the ECD. A potentially secreted sixth variant contains the Ig-like V-type domain followed by a 45 aa substitution (5-7, 9). Within the ECD, human Siglec-10 is most closely related to Siglec-5 (42% aa sequence identity). It shares 63% aa sequence identity with mouse Siglec-G. Siglec-10 is expressed on eosinophils, neutrophils, monocytes, and B cells (5, 8) with some splice variants predominating in particular cell types and tissue locations (6, 7, 9). It is upregulated on eosinophils in mouse models of allergic respiratory inflammation (10). Siglec-10 binds sialated proteins and lipids in α2,3 or α2,6 linkage and shows a preference for GT1b gangliosides (7, 11). This binding can be modulated by *cis* interactions of Siglec-10 with sialated molecules expressed on the same cell.(7) When tyrosine phosphorylated, the cytoplasmic ITIMs interact with phosphatases SHP-1 and SHP-2 to propagate inhibitory signals (5, 9).

**References:**

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