

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived mouse Siglec-G protein		
	Mouse Siglec-G (Met19-Lys543) Accession # Q8OZE3.1	IEGRMDP	Mouse IgG _{2a} (Glu98-Lys330)
	N-terminus		C-terminus
N-terminal Sequence	Met19		
Analysis			
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	86 kDa		

SPECIFICATIONS

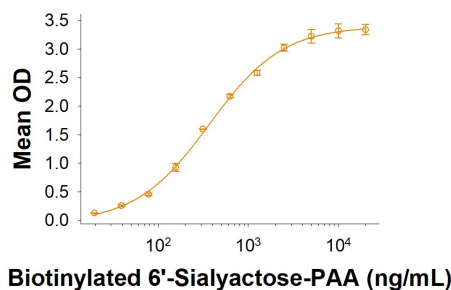
SDS-PAGE	102-114 kDa, under reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Mouse Siglec-G Fc Chimera (Catalog # 10103-SL) is used at 5 µg/mL, biotinylated 6'-Sialylactose-PAA binds with an ED ₅₀ of 0.2-1.2 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, ≤ -20 °C under sterile conditions after reconstitution.

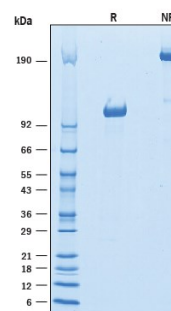
DATA

Binding Activity



When Recombinant Mouse Siglec-G Fc Chimera (Catalog # 10103-SL) is used at 5 µg/mL, Biotinylated 6'-Sialylactose-PAA binds with an ED₅₀ of 0.2-1.2 µg/mL.

SDS-PAGE



2 µg/lane of Recombinant Mouse Siglec-G Fc Chimera (Catalog # 10103-SL) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 102-114 kDa and 205-230 kDa, respectively.

BACKGROUND

Siglecs are type I transmembrane proteins that belong to the immunoglobulin (Ig) superfamily and function as mammalian lectins (1). They are characterized by an extracellular domain consisting of various numbers of Ig domains with a conserved N-terminal V-set Ig ligand-binding domain. This binds species-specific sialic acid motifs on protein and lipid scaffolds to regulate intracellular signaling pathways (2). The cytoplasmic tail has signaling motifs, in most cases immunoreceptor tyrosine-based inhibitory motif (ITIM) (3). Siglec-G is a member of the CD33-related Siglec family in the mouse. It is the apparent ortholog of human Siglec-10 (4). It is expressed by mature B cells, but significant levels of transcript were also detected in DC, myeloid cells, and to a lesser extent, T cells (5). Mature Siglec-G consists of a 526 amino acid (aa) extracellular domain (ECD), a 21 aa transmembrane segment, and a 124 aa cytoplasmic domain. Within the ECD, mouse Siglec-G shares 63% and 86% aa sequence identity with the human and rat ortholog Siglec-10, respectively. Siglec-10 binds sialated proteins and lipids in alpha 2,3 or alpha 2,6 linkage and shows a preference for GT1b gangliosides (6, 7). This binding can be modulated by *cis* interactions of Siglec-10 with sialated molecules expressed on the same cell (6). When tyrosine phosphorylated, the cytoplasmic ITIMs interact with phosphatases SHP-1 and SHP-2 to propagate inhibitory signals (8, 9).

References:

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