# Recombinant Mouse Siglec-3/CD33 Fc Chimera

Catalog Number: 10102-SL

## DESCRIPTION

**Source**

Mouse myeloma cell line, NS0-derived mouse Siglec-3/CD33 protein

| Mouse Siglec-3/CD33 (Gln17-Glu240) Accession # Q63994 | IEGRMDP | Mouse $IgG_{2a}$ (Glu98-Lys330) |
|---|---|---|

N-terminus C-terminus

| | |
|---|---|
| **N-terminal Sequence Analysis** | Gln17 inferred from enymatic pyroglutamate treatment revealing Asp18 |
| **Structure / Form** | Disulfide-linked homodimer |
| **Predicted Molecular Mass** | 52 kDa |

## SPECIFICATIONS

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|---|---|
| **SDS-PAGE** | 55-75 kDa, under reducing conditions |
| **Activity** | Measured by its binding ability in a functional ELISA.<br>When Recombinant Mouse Siglec-H Fc Chimera (Catalog # 10264-SH) is immobilized at 2 µg/mL (100 µL/well), the concentration of Recombinant Mouse Siglec-3 Fc Chimera (Catalog # 10102-SL) that produces 50% of the optimal binding response is 5-20 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

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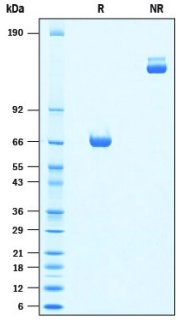
| **Reconstitution** | Reconstitute at 500 µg/mL in PBS. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. |
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**<br>• 12 months from date of receipt, -20 to -70 °C as supplied.<br>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>• 3 months, -20 to -70 °C under sterile conditions after reconstitution. |

## DATA

**SDS-PAGE**




2 µg/lane of Recombinant Mouse Siglec-3/CD33 Fc Chimera (Catalog # 10102-SL) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 55-75 kDa and 110-150 kDa, respectively.

## BACKGROUND

Siglec-3 (sialic acid binding Ig-like lectin 3), also known as myeloid cell surface antigen CD33 and GP67, is an I-type (Ig-type) lectin belonging to the Ig superfamily. Siglecs are characterized by an N-terminal Ig-like V-type domain, which mediates sialic acid binding, followed by varying numbers of Ig-like C2-type domains (1, 2). Fourteen human and nine mouse Siglecs have been characterized and are divided into 2 families: CD33 related and evolutionarily conserved (3). Mature mouse Siglec-3 consists of a 224 amino acid (aa) extracellular domain (ECD), containing one IgV and one IgC2 domain and shares 56% aa identity with human Siglec-3. Mouse Siglec-3 is expressed on myeloid precursors in the bone marrow, mostly in the mature stages of the granulocytic lineage (4). Each Siglec has a distinct preference for binding the various types of sialylated glycans found on the surface of mammalian cells and they most likely evolved to regulate host immune responses via the recognition of self-glycans (5). Unlike human Siglec-3, mouse Siglec-3 lacks a canonical cytoplasmic ITIM domain. Instead, mouse Siglec-3 possesses a charged amino acid in its transmembrane domain, which may interact with an ITAM adaptor protein (6). Additionally, mouse Siglec-3 binds sialic acids found on mucins rather than α2-3- or α2-6-linked sialic acids on lactosamine units to which human Siglec-3 binds (7, 8). These differences suggest mouse and human Siglec-3 might not be functionally identical (8). Human Siglec-3 continues to be a therapeutic target for the treatment of acute myeloid leukemia and is a high potential risk factor for Alzheimer's (9).



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## MANUFACTURING SPECIFICATIONS

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