

**DESCRIPTION**

<b>Source</b>	Mouse myeloma cell line, NS0-derived mouse Siglec-15 protein Arg24-Tyr250, with a C-terminal 6-His tag Accession # NP_001094508.1
<b>N-terminal Sequence Analysis</b>	Arg24
<b>Predicted Molecular Mass</b>	25 kDa

**SPECIFICATIONS**

<b>SDS-PAGE</b>	30-45 kDa, under reducing conditions
<b>Activity</b>	Measured by its ability to inhibit IL-2 secretion by mouse T cells in the presence of anti-CD3. The ED <sub>50</sub> for this effect is 0.075-0.75 µg/mL.
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the protein by the LAL method.
<b>Purity</b>	>95%, 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 200 µg/mL in 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>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <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>

**DATA**

**Bioactivity**

Recombinant Mouse Siglec-15 His-tag (Catalog # 10288-SL) inhibits IL-2 secretion by mouse T cells in the presence of Rat Anti-Mouse CD3 Monoclonal Antibody (Catalog # MAB4841). The ED<sub>50</sub> for this effect is 0.075-0.75 µg/mL.

**SDS-PAGE**

2 µg/lane of Recombinant Mouse Siglec-15 His-tag (Catalog # 10288-SL) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 30-45 kDa.

**BACKGROUND**

Siglec-15 is a transmembrane glycoprotein in the Siglec family of sialic acid-binding immune regulatory molecules (1). Mature mouse Siglec-15 consists of a 239 amino acid (aa) extracellular domain (ECD) with two Ig-like domains, a 21 aa transmembrane segment, and a 59 aa cytoplasmic domain. Within the ECD, mouse Siglec-15 shares 85% and 92% aa sequence identity with human and rat Siglec-15, respectively. In human Siglec-15, alternative splicing generates an additional isoform that lacks the signal peptide and first Ig-like domain. Siglec-15 associates with the signaling molecules DAP12 and DAP10 (2-5). It is expressed on osteoclasts, macrophages, and dendritic cells (2-6) and binds to the sialyl-Tn antigen (2, 3, 6). This interaction induces the production of TGF-beta by tumor-associated macrophages (3). Siglec-15 function is important for osteoclast formation and TRANCE/RANK Ligand signaling in osteoclasts (4-6). Siglec-15 is broadly upregulated on human cancer cells and tumor infiltrating myeloid cells (7). Siglec-15 suppresses antigen-specific T cell responses *in vitro* and *in vivo* therefore it is considered to be an immune suppressor and potential target for normalization cancer immunotherapy (7).

**References:**

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3. Takamiya, R. *et al.* (2013) Glycobiology **23**:178.
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