

DESCRIPTION

Source Chinese Hamster Ovary cell line, CHO-derived human Siglec-15 protein
Phe20-Tyr251, with a C-terminal 6-His tag
Accession # Q6ZMC9.1

N-terminal Sequence Analysis Phe20

Predicted Molecular Mass 26 kDa

SPECIFICATIONS

SDS-PAGE 27-37 kDa, under reducing conditions

Activity Measured by its ability to inhibit anti-CD3 antibody induced IL-2 or IFN-gamma secretion by human T cells.
The ED₅₀ for this effect is 0.2-2 µg/mL.

Endotoxin Level <0.10 EU per 1 µg of the protein by the LAL method.

Purity >90%, 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 200 µg/mL in PBS.

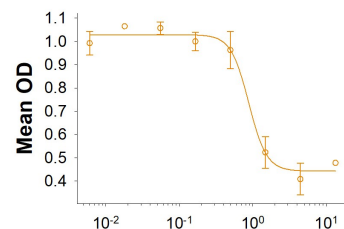
Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 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 to -70 °C under sterile conditions after reconstitution.

DATA

Bioactivity



Recombinant Human Siglec-15 His-tag Protein Bioactivity.
Measured by its ability to inhibit anti-CD3 antibody induced IL-2 secretion by human T cells. The ED₅₀ for this effect is 0.2-2 µg/mL.

Recombinant Human Siglec-15 (µg/mL)

BACKGROUND

Sialic acid-binding Ig-like lectin 15 (Siglec-15) is a transmembrane glycoprotein in the Siglec family of sialic acid-binding immune regulatory molecules (1). Siglecs can be divided into 2 classes: evolutionarily conserved Siglecs and CD33-related Siglecs (2). Siglec-15 belongs to the evolutionarily conserved class and is the only Siglec highly conserved throughout vertebrate evolution (3). Mature human Siglec-15 consists of an extracellular domain (ECD) with two Ig-like domains, a transmembrane segment, and a cytoplasmic domain. Within the ECD, human Siglec-15 shares 85% and 84% amino acid sequence identity with mouse and rat Siglec-15, respectively. Alternative splicing of Siglec-15 generates an additional isoform that lacks the signal peptide and first Ig-like domain. Siglec-15 is expressed on osteoclasts, macrophages, and dendritic cells (3-7) and binds to the sialyl-Tn antigen (3, 4, 7). Siglec-15 function is important for osteoclast formation and TRANCE/RANK Ligand signaling in osteoclasts (5-7) and for the production of TGF-beta by tumor-associated macrophages (4). Additionally, Siglec-15 associates with the signaling molecules DAP12 and DAP10 through a lysine residue located in the transmembrane domain (3-6). Siglec-15 is broadly upregulated on human cancer cells and tumor infiltrating myeloid cells (8). 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 (8).

References:

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3. Angata, T. *et al.* (2007) Glycobiology **17**:838.
4. Takamiya, R. *et al.* (2013) Glycobiology **23**:178.
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