Recombinant Human Siglec-11 Fc Chimera

Catalog Number: 3258-SL

DESCRIPTION

Source

Chinese Hamster Ovary cell line, CHO-derived human Siglec-11 protein

N-terminal Sequence Analysis	Asn17
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	84.4 kDa (monomer)

SPECIFICATIONS

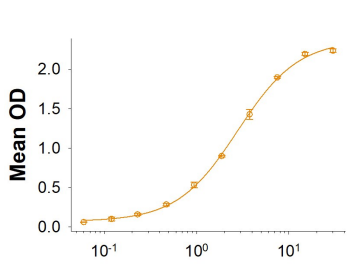
SDS-PAGE	110-135 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human Siglec-11 Fc Chimera is immobilized at 2 µg/mL (100 µL/well), it binds Biotinylated Recombinant Human Siglec-15 Fc Chimera Avi-tag protein with an ED_{50} of 0.7-4.2 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in sterile 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

Binding Activity



When Recombinant Human Siglec-11 Fc Chimera (Catalog # 3258-SL) is immobilized at 2 µg/mL (100 µL/well), it binds Biotinylated Recombinant Human Siglec-15 Fc Chimera Avi-tag protein with an ED_{50} of 0.7-4.2 µg/mL.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

Recombinant Human Siglec-11 Fc Chimera

Catalog Number: 3258-SL

BACKGROUND

Siglecs (sialic acid binding Ig-like lectins) are I-type lectins that belong to the immunoglobulin superfamily. They are characterized by anN-terminal Ig-like V-set domain which mediates sialic acid binding, followed by a varying numbers of Ig-like C2-set domains. Siglecs-3 and 5 - 13 constitute the CD33/Siglec-3 related group, which are defined by their sequence homology and differential expression in the hematopoietic system (1-3). Mature human Siglec-11 consists of a 534 amino acid (aa) extracellular domain (ECD), a 23 aa transmembrane segment, and a 114 aa cytoplasmic domain. The ECD contains one Ig-like V-set domain, and three Ig-like C2-set domains. The cytoplasmic domain contains two immunoreceptor tyrosine-based inhibitory motifs (ITIMs) (4). A splice variant of Siglec-11 has a deletion of nearly 100 aa in the extracellular juxtamembrane region. Among siglecs, the ECD of Siglec-11 is most closely related to that of Siglec-10 (82% aa sequence identity). The cytoplasmic domains of these proteins are only 20% identical. Siglec-11 is closely related to the pseudogenes Siglec-14 and Siglec-16 (4, 5). Human Siglec-11 shares 90%-96% aa sequence identity with Siglec-11 from great apes. Rodent orthologs of Siglec-11 have not been identified. In human, Siglec-11 is expressed in tissue macrophages, brain microglia, and inflammatory site monocytes (4). Strong microglial expression is specific to humans, as it is less prominent or absent in chimpanzees and orangutans (5). Siglec-11 forms 180 kDa disulfide-linked dimers. It shows a strong binding preference for sialic acid in α2-8 linkage which is unusual for siglecs (4). A conserved arginine in the Ig-like V-set domain only partially contributes to Siglec-11 ligand recognition, in contrast to its being required in other siglecs (4). Tyrosine phosphorylation of the cytoplasmic region of Siglec-11 promotes association with the phosphatases SHP-1 and SHP-2 (4).

References:

1. Varki, A. and T. Angata (2006) Glycobiology **16**:1R.
2. Crocker, P.R. (2005) Curr. Opin. Pharmacol. **5**:431.
3. Crocker, P.R. (2002) Curr. Opin. Struct. Biol. **12**:609.
4. Angata, T. *et al.* (2002) J. Biol. Chem. **277**:24466.
5. Hayakawa, T. *et al.* (2005) Science **309**:1693.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 **Canada** TEL 855 668 8722 **China** TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449