

DESCRIPTION

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|-------------------------------------|--|--------|---|
| Source | Chinese Hamster Ovary cell line, CHO-derived human VSIG3 protein | | |
| | Human VSIG3 (Leu23-Thr136) Accession # Q5DX21 | IEGRMD | Human IgG ₁ (Pro100-Lys330) |
| | N-terminus | | C-terminus |
| N-terminal Sequence Analysis | Leu23 | | |
| Structure / Form | Disulfide-linked homodimer | | |
| Predicted Molecular Mass | 39 kDa | | |

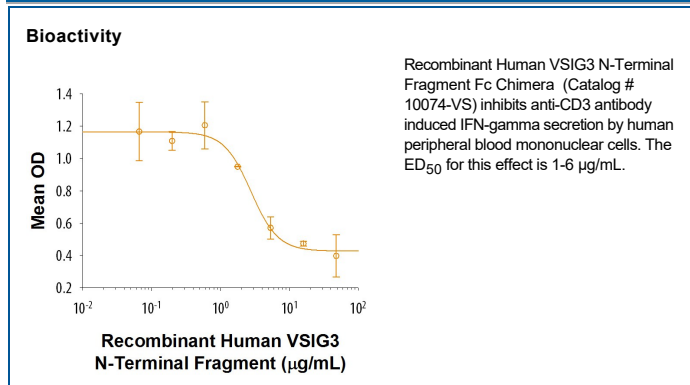
SPECIFICATIONS

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|------------------------|---|
| SDS-PAGE | 45-58 kDa, reducing conditions |
| Activity | Measured by its ability to inhibit anti-CD3 antibody induced IL-17 or IFN-gamma secretion by human peripheral blood mononuclear cells (PBMC). The ED ₅₀ for this effect is 1-6 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. See Certificate of Analysis for details. |

PREPARATION AND STORAGE

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

DATA



BACKGROUND

VSIG3, also known as IGSF11, BT-IgSF, and CLMP, is an approximately 50 kDa transmembrane adhesion protein (1). Mature human VSIG3 consists of a 219 amino acid (aa) extracellular domain (ECD), a 21 aa transmembrane segment, and a 169 aa cytoplasmic domain (2). Within the ECD, human VSIG3 shares 95% aa sequence identity with mouse and rat VSIG3. Human ECD contains two tandem Ig-like domains, and this product includes only the N-terminal Ig-like domain (aa 23-136). Alternative splicing generates additional isoforms with a substituted signal peptide that may also have a deletion in the second Ig-like domain (3). VSIG3 is expressed on epithelial and endothelial cells, neurons and glial cells, and platelets (2-4). It localizes to epithelial tight junctions and mediates homophilic in trans cell adhesion (3-5). VSIG3 also localizes to neuronal postsynaptic densities where it recruits the GluA1 and GluA2 subunits of AMPA receptors and supports excitatory synaptic transmission (6). The short isoform can be up-regulated in gastric cancer (7). In zebrafish, VSIG3 is expressed in melanophores and plays a role in the development and patterning of pigment cells (8).

References:

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6. Jang, S. *et al.* (2016) *Nat. Neurosci.* **19**:84.
7. Watanabe, T. *et al.* (2005) *Cancer Sci.* **96**:498.
8. Eom, D.S. *et al.* (2012) *PLoS Genet.* **8**:e1002899.