

DESCRIPTION

Source Human embryonic kidney cell, HEK293-derived cynomolgus monkey VSIG4 protein
Arg25-Pro288, with a C-terminal 6-His tag
Accession # XP_005593850.1

N-terminal Sequence Analysis Arg25

Predicted Molecular Mass 30 kDa

SPECIFICATIONS

SDS-PAGE 35-45 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 0.30-3.00 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

Reconstitution Reconstitute at 200 µg/mL in PBS.

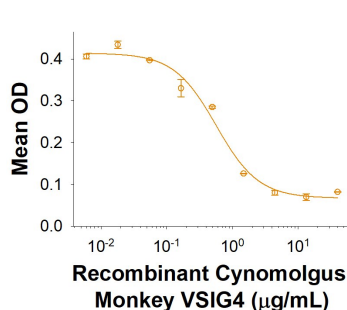
Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

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.

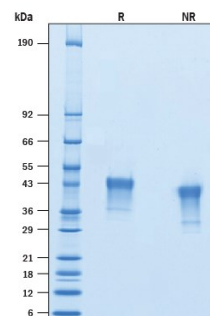
DATA

Bioactivity



Recombinant Cynomolgus Monkey VSIG4 His-tag Protein Bioactivity. 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 0.30-3.00 µg/mL.

SDS-PAGE



Recombinant Cynomolgus Monkey VSIG4 His-tag Protein SDS-PAGE. 2 µg/lane of Recombinant Cynomolgus Monkey VSIG4 His-tag (Catalog # 10807-VS) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 35-45 kDa.

BACKGROUND

VSIG4 (V-set and immunoglobulin domain containing 4), also known as CRIG and Z39IG, is a 45 kDa, type I transmembrane protein of the B7 family within the Ig superfamily that is expressed only in tissue-resident macrophages (1-4). The cynomolgus VSIG4 cDNA encodes 404 amino acids (aa) including a 24 aa signal sequence, a 264 aa extracellular domain (ECD) containing a V-type and a C2-type Ig domain, a 23 aa transmembrane domain and a 93 aa cytoplasmic domain (5). The cynomolgus VSIG4 ECD shares 94% aa identity with human VSIG4 ECD. VSIG4 is specifically expressed on macrophages in the thymic medulla, peritoneum, alveoli, synovia, adipose and heart, liver Kupffer cells, placental Hofbauer cells, and atherosclerotic foam cells (1-4, 6-9). It is absent on infiltrating macrophages (8). VSIG4 is a complement receptor that binds C3b and iC3b fragments, internalizes them to recycling endosomes, and is recycled to the cell surface (4, 6). It contributes significantly to innate immunity by binding and phagocytosis of complement-opsonized invading pathogens (4, 8, 10). Binding of either native or recombinant soluble VSIG4 to C3b inhibits complement amplification through the alternative, but not classical, pathway (10, 11). VSIG4 is also a negative regulator of mouse and human T cell activation (2). Although VSIG4 engagement may activate NF kappa B and thus be pro-inflammatory in some cases, many of its activities are important in resolving, rather than initiating, inflammation (1, 2, 7, 10, 11).

References:

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6. Tanaka, M. *et al.* (2008) *Clin. Exp. Immunol.* 154:38.
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