

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived cynomolgus monkey VSIG4 protein		
	Cynomolgus Monkey VSIG4 (Arg25-Pro288) Accession # XP_005593850.1	IEGRMD	Human IgG ₁ (Pro100-Lys330)
	N-terminus		C-terminus
N-terminal Sequence Analysis	Arg25		
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	58 kDa		

SPECIFICATIONS

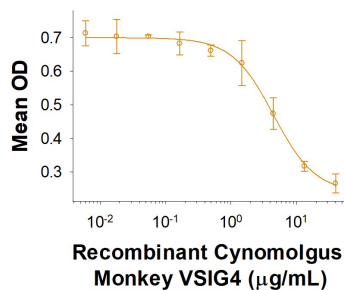
SDS-PAGE	67-76 kDa, under reducing conditions
Activity	Measured by its ability to inhibit anti-CD3 antibody induced IL-2 or IFN-gamma secretion by human T cells. The ED ₅₀ for this effect is 0.6-6 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS 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	<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.

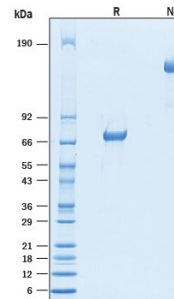
DATA

Bioactivity



Recombinant Cynomolgus Monkey VSIG4 Fc Chimera (Catalog # 10155-VS) inhibits anti-CD3 antibody induced IFN-gamma secretion by human T cells. The ED₅₀ for this effect is 0.6-6 µg/mL.

SDS-PAGE



2 µg/lane of Recombinant Cynomolgus Monkey VSIG4 Fc Chimera (Catalog # 10155-VS) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie Blue staining, showing bands at 67-76 kDa and 130-150 kDa, respectively.

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 NFκB 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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