Data Sheet (Cat.No.TMPY-03528)

TargetMol

VSIG4 Protein, Human, Recombinant (hFc)

General Information

Synonyms:	CRIg;Z39IG;V-set and immunoglobulin domain containing 4
Protein Construction:	A DNA sequence encoding the human VSIG4 (NP_009199.1) (Met1-Pro283) was expressed with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Arg 20
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9Y279-1
Molecular Weight:	56.2 kDa (predicted); 57 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	>95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

VSIG4 (V-set and immunoglobulin domain containing 4), also known as complement receptor of the immunoglobulin superfamily (CRIg) and Z39Ig, is a type I transmembrane glycoprotein. It is a B7 family-related protein and an Ig superfamily member. In contrast to the B7 family members which contain two IgG domains, VSIG4 contains one complete V-type I g domain and a truncated C-type I g domain. VSIG4 is exclusively expressed on tissue resident macrophages and binds to multimers of C3b and iC3b that are covalently attached to particle

surfaces. No VSIG4 expression appears to be present in T and B cells. VSIG4 functions as a negative regulator of T cell activation, and may be involved in the maintenance of peripheral T cell tolerance, and is also identified as a potent suppressor of established inflammation. Mouse VSIG4 is synthesized as a 28 amino acid precursor that contains a signal sequence, a V-type I g domain (aa 36-115), one potential N-linked glycosylation site, and a single transmembrane domain. The V-type I g domain of mouse VSIG4 shares 86% and 8% aa sequence identity with the V-type I g domains of rat and human VSIG4, respectively.

Reference

Vogt, L. et al., 2006, J Clin Invest.116: 2817-2826.
Helmy, K. et al., 2006, Cell. 124:915-927.Wiesmann, C. et al., 2006, Nature. 444:217-220.
Zang,X. et al., 2006, J Clin Invest. 116: 2590-2593.
Katschke, KJ. et al., 2007, J. Exp. Med. 204:1319-1325.He,JQ. et al., 2008, Mol Immunol. 45: 4041-4047.