Mouse VSIG4 Alexa Fluor® 700-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF4674N
100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse VSIG4 in direct ELISAs. In direct ELISAs, less than 5% cross-reactivity with recombinant human (rh) VSIG4 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse VSIG4 His20-Pro187 Accession # NP_808457
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Mouse VSIG4 (V-set and immunoglobulin domain containing 4), also known as CRIg and Z39IG, is a type I transmembrane glycoprotein that is a B7 family-related protein and an Ig superfamily member (1-2). Mouse VSIG4 is synthesized as a 280 amino acid (aa) precursor that contains a signal sequence, an IgV-type immunological domain (aa 36-115), one potential N-linked glycosylation site, and a single transmembrane domain (2). The IgV domain of mouse VSIG4 shares 86% and 80% aa sequence identity with the IgV domains of rat and human VSIG4, respectively. Quantitative PCR reveals that VSIG4 mRNA is expressed at high levels in the liver, dendritic cells, neutrophils, and macrophages, and at lower levels in the lung, heart, spleen, and lymph nodes (1). No VSIG4 expression appears to be present in T and B cells (1). The use of polyclonal rabbit serum against the extracellular domain of VSIG4 demonstrates that VSIG4 is specifically expressed on naïve resting tissue macrophages, and that the expression is downregulated or lost upon activation (1). Furthermore, histological analysis shows expression of $VSIG4^+$ macrophages only in the liver, thymic medulla, and heart (1). VSIG4 macrophages are not detected in the intestines, kidney, skeletal muscle, lymph node, splenic white pulp, lung, or brain (1). Studies show that VSIG4/Fc Chimera strongly inhibits proliferation of anti-CD3 as well as anti-CD3/anti-CD28-stimulated T cells (1). Indeed, VSIG4 functions as a negative regulator of mouse as well as human T cell activation, and may be involved in the maintenance of peripheral T cell tolerance and/or unresponsiveness (1). In addition, VSIG4's expression on Kupffer cells is required for efficient binding and phagocytosis of complement C3 opsonized particles (2). VSIG4 acts as a macrophage complement receptor by binding complement fragments C3b and iC3b (2). VSIG4 binding to C3b inhibits complement activation through the alternative pathway, making it a potent suppressor of established inflammation (3-4).

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