Human VSIG4 Alexa Fluor® 532-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF4646X
100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human VSIG4 in direct ELISAs and Western blots. In direct ELISAs, less than 15% cross-reactivity with recombinant mouse VSIG4 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human VSIG4 Arg20-Pro283 Accession # Q9Y279
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 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.*

Western Blot	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

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 gene is located on the X chromosome (2). The human VSIG4 cDNA encodes 399 amino acids (aa) including a 19 aa signal sequence, a 264 aa extracellular domain (ECD) containing a V-type and a C2-type Ig domain, a 21 aa transmembrane domain and a 95 aa cytoplasmic domain (3). The human VSIG4 ECD shares 84% aa identity with canine VSIG4. Within the IgV domain, it shares 90%, 80%, and 78% aa identity with bovine, mouse and rat VSIG4, respectively; these animals lack the C2-type domain. Splice isoforms of 321, 305, 272, 201, and 199 aa lack all or part of the cytoplasmic domain, the C2-type Ig domain and/or the transmembrane domain (5). 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).

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