Human VAP-A Alexa Fluor® 532-conjugated Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF5820X
100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human VAP-A in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human VAP-B and recombinant rat VAP-B is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human VAP-A Ala2-Met132 Accession # Q9P0L0
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

Vesicle-associated membrane protein (VAMP)-associated protein A (VAP-A; also VAMP-A and VAP-33) is a 33 kDa, ubiquitously expressed, type IV transmembrane protein belonging to the VAP family of proteins (1). It is found in plasma and ER membranes as well as in intracellular vesicles as a homodimer and a heterodimer with VAP-B. Human VAP-A is synthesized as a 249 amino acid (aa) precursor that contains a 227 aa cytoplasmic domain and a 21 aa transmembrane region. The cytoplasmic domain contains a mobile sperm protein (MSP) domain (aa 13-131) and a coiled-coil region (aa 169-205). Human VAP-A is 97% aa identical to mouse and rat VAP-A. VAP-A and VAP-B recruit FFAT (two phenylalanines in an acidic tract)-motif-containing proteins to the cytosolic surface of ER membranes through a conserved region within their MSP domain, and they have been implicated in regulation of membrane transport, phospholipid biosynthesis, and the unfolded protein response (2, 3). Their role in maintaining the identities of intracellular organelles has not been demonstrated, but their ability to interact with lipid-transfer/binding proteins (LT/BPs) may affect the lipid composition of certain cellular membranes (2, 4). One study shows that VAPs play a critical role in maintaining the structural and functional properties of the Golgi complex (2). Researchers found that knockdown of VAP reduces the levels of phosphatidylinositol-4-phosphate (PI4P), diacylglycerol (DAG), and sphingomyelin (SM) in Golgi membranes and exports pleiotropic effects in Golgi-mediated transport (2). The effects of VAPs are mediated by their interacting FFAT-motif-containing proteins Nir2, OSBP, and CERT (2). VAPs provide a scaffold for these LT/BPs at the ER-Golgi membrane contact sites, thereby affecting the lipid composition of the Golgi membranes and consequently their structural and functional identities (2). Most recently, researchers found that VAP-A associates and co-localizes with protrudin, a protein that promotes neurite formation, and found that it was an important regulator both of the subcellular localization of protrudin and of its ability to stimulate neurite outgrowth (5).

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