Human VAP-B
Alexa Fluor® 488-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 736904

Catalog Number: IC58551G
100 TESTS

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human VAP-B in direct ELISAs and Western blots. In direct ELISAs, approximately 25% cross-reactivity with recombinant human VAP-A is observed.
Source	Monoclonal Mouse IgG_1 Clone # 736904
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human VAP-B Ala2-Pro132 Accession # O95292
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *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.

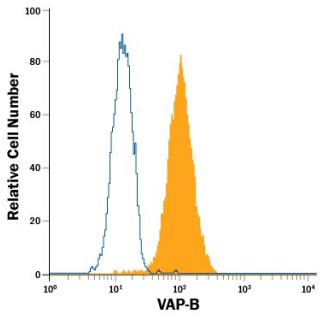
APPLICATIONS

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.*

	Recommended Concentration	Sample
Intracellular Staining by Flow Cytometry	10 µL/10^6 cells	See Below

DATA

Intracellular Staining by Flow Cytometry



Detection of VAP-B in T98G Human Cell Line by Flow Cytometry. T98G human glioblastoma cell line was stained with Mouse Anti-Human VAP-B Alexa Fluor® 488-conjugated Monoclonal Antibody (Catalog # IC58551G, filled histogram) or isotype control antibody (Catalog # IC002G, open histogram). To facilitate intracellular staining, cells were fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005). View our protocol for Staining Intracellular Molecules.

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.

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BACKGROUND

Vesicle-associated Membrane Protein (VAMP)-associated Protein B (VAP-B), also known as VAMP-B, is an ~30 Da ubiquitously expressed type IV transmembrane (TM) protein that belongs to the VAP family (1, 2). It is found in endoplasmic reticulum (ER), Golgi and other membranes as a homodimer or a heterodimer with VAP-A, probably associating through a GxxxG motif in the transmembrane regions (1, 2). Human VAP-B cDNA encodes 243 amino acids (aa) that include a 222 aa cytoplasmic domain and a 21 aa C-terminal membrane anchor. The cytoplasmic domain contains a mobile sperm protein (MSP) domain (aa 7-124) plus a coiled-coil region (aa 159-196) that initiates dimerization. Over aa 2-132, human VAP-B shares 97% aa sequence identity with mouse VAP-B and 81% aa sequence identity with VAP-A. VAP-A and VAP-B MSP domains recruit FFAT (two phenylalanines in an acidic tract)-motif-containing proteins to the cytosolic surface of ER membranes (2-4). FFAT proteins mediate many of the effects of VAPs on regulation of membrane transport, phospholipid biosynthesis, microtubule organization, and the unfolded protein response (2, 3). VAPs also interact with some SNARE and viral proteins (2). A human polymorphism of VAP-B, P56S, is found in three familial motor neuron diseases, notably the amylotrophic lateral sclerosis variant ALS8 (2). It produces a non-functional protein that can dimerize with, and inhibit the function of, normal VAP-B, leading to formation of intracellular aggregates and increased ER-stress-induced death of motor neurons (5-8). It can also promote cleavage and secretion of soluble VAP-B, which can then function as a ligand for EPH receptors (9). A naturally occurring 99 aa isoform of VAP-B that shows a 29 aa substitution for aa 71-243 is termed VAP-C (1, 10). It also appears to be a negative regulator of VAP-A and VAP-B (10). While VAP-B is used by hepatitis C virus (HCV) for its propagation, VAP-C inhibits HCV propagation (10).

References:

1. Nishimura, Y. *et al.* (1999) Biochem. Biophys. Res. Commun. **254**:21.
2. Lev, S. *et al.* (2008) Trends Cell Biol. **18**:282.
3. Peretti, D. *et al. (*2008) Mol. Biol. Cell **19**:3871.
4. Kaiser, S.E. *et al.* (2005) Structure **13**:1035.
5. Prosser, D.C. *et al.* (2008) J. Cell Sci. **121**:3052.
6. Gkogkas, C. *et al.* (2008) Hum. Mol. Genet. **17**:1517.
7. Suzuki, H. *et al.* (2009) J. Neurochem. **108**:973.
8. Kim, S. *et al.* (2010) J. Biol. Chem. **285**:13839.
9. Tsuda, H. *et al.* (2008) Cell **133**:963.
10. Kukihara, H. *et al.* (2009) J. Virol. **83**:7959.

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