Human VAP-1/AOC3
Alexa Fluor® 488-conjugated Antibody

Monoclonal Mouse IgG_{2A} Clone # 393106

Catalog Number: IC39571G

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human VAP-1/AOC3 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant mouse VAP-1 is observed.
Source	Monoclonal Mouse IgG_{2A} Clone # 393106
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant human VAP-1/AOC3 Gly27-Asn763 Accession # Q16853
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2 mg/mL 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	0.25-1 µg/10^6 cells	HUVEC human umbilical vein endothelial cells fixed with paraformaldehyde and permeabilized with saponin

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

Vascular adhesion protein-1 (VAP-1) is a copper amine oxidase with a topaquinone cofactor. VAP-1 is a Type II integral membrane protein, but a soluble form of the enzyme is present in human serum, and its level increases in diabetes and some inflammatory liver diseases (1, 2). VAP-1 catalyzes the oxidative deamination of small primary amines such as methylamine, benzylamine, and aminoacetone in a reaction that produces an aldehyde, ammonia, and H_2O_2 (3). The enzyme is sensitive to inhibition by semicarbazide. VAP-1 expression is highest in the endothelium of lung, heart, and intestine, but low in tissues such as brain, spleen, kidney, and liver (4). VAP-1 vascular expression is regulated at sites of inflammation through its release from intracellular granules in which the protein is stored (5). The adhesive function of VAP-1 has been demonstrated in studies showing that the protein is important for the adherence of certain lymphocyte subtypes to inflamed endothelial tissues (6). VAP-1 mediated adhesion is involved in the process of leukocyte extravasation, an important feature of inflammatory responses. The role of VAP-1 amine oxidase activity in this process is not fully defined, but it appears to be carbohydrate-dependent (7). VAP-1 is considered to be a therapeutic target for diabetes, oxidative stress, and inflammatory diseases (8).

References:

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bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449