

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human VAP-1/AOC3 in direct ELISAs and Western blots. In Western blots, 50% cross-reactivity with recombinant mouse VAP-1/AOC3 is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 393112
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>S. frugiperda</i> 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 0.2mg/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

Vascular adhesion protein-1 (VAP-1), also called AOC3 (amine oxidase copper-containing 3) or SSAO (semicarbazide-sensitive amine oxidase), 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). Human and mouse VAP-1 share 83% amino acid sequence identity. 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 H₂O₂ (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).

PRODUCT SPECIFIC NOTICES

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