Human JAM-A
Alexa Fluor® 488-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 654806

Catalog Number: FAB1103G
100 TESTS

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human JAM-A in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) JAM-B, recombinant mouse (rm) JAM-A, or rmJAM-4 is observed.
Source	Monoclonal Mouse IgG_1 Clone # 654806
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human JAM-A Ser28-Ala242 (predicted) Accession # Q9Y624
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.

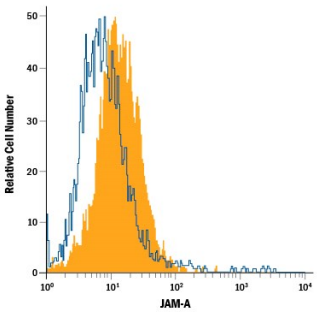
APPLICATIONS

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
Flow Cytometry	5 µL/10^6 cells	See Below

DATA

Flow Cytometry



Detection of JAM-A in MCF-7 Human Cell Line by Flow Cytometry. MCF-7 human breast cancer cell line was stained with Mouse Anti-Human JAM-A Alexa Fluor® 488-conjugated Monoclonal Antibody (Catalog # FAB1103G, filled histogram) or isotype control antibody (Catalog # IC002G, open histogram). View our protocol for Staining Membrane-associated Proteins.

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

The family of Junctional Adhesion Molecules (JAM), comprising at least three members, are type I transmembrane receptors belonging to the immunoglobulin (Ig) superfamily (1, 2). These proteins are localized in the tight junctions between endothelial or epithelial cells. Some family members are also found on blood leukocytes and platelets. Human JAM-A, also known as Platelet Adhesion Molecule 1 (PAM-1) and Platelet F11 Receptor (3), is predominantly expressed at intercellular junctions of both epithelial cells and endothelial cells (1 - 4). It is also expressed on circulating blood cells including neutrophils, monocytes, platelets, erythrocytes and lymphocytes (5). Human JAM-A cDNA predicts a 299 amino acid (aa) residue precursor protein with a putative 27 aa signal peptide, a 210 aa extracellular region containing two Ig-like V-subset domains, a 24 aa transmembrane domain and a 38 aa cytoplasmic domain. The human and mouse proteins share approximately 67% aa sequence homology. Human JAM-A also shares approximately 35% and 32% aa sequence homology with human JAM-B and JAM-C, respectively. JAM-A exhibits homophilic interactions to regulate tight junction assembly and modulate paracellular permeability. This homophilic interaction also mediates platelet aggregation and adhesion to endothelial cells and may play a role in thrombosis (3). JAM-A binds heterotypically with the β2 Integrin Lymphocyte Function-associated Antigen-1 (LFA-1). This JAM-A-LFA-1 interaction is involved in leukocyte adhesion and transmigration (6). JAM-A has also been shown to bind Reovirus Attachment Protein Sigma-1 to permit reovirus infection and signal virus-induced apoptosis (7).

References:

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4. Martin-Padura, I. *et al*. (1998) J. Cell Biol. **142**:117.
5. Williams, L.A. *et. al*. (1999) Mol. Immunol. **36**:1175.
6. Ostermann, G. *et al*. (2002) Nature Immunol. **3**:151.
7. Barton, E.S. *et al*. (2001) Cell **104**:441.

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