

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human JAM-A in Western blots. In this format, approximately 15% cross-reactivity with recombinant mouse JAM-A is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human JAM-A Ser28-Ala242 Accession # Q9Y624
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

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
Western Blot	0.1 µg/mL	Recombinant Human JAM-A Fc Chimera (Catalog # 1103-JM)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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.