

#### DESCRIPTION

|                                                                                                                                                                                                         |                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human/Mouse                                                                                              |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human JAM-B/VE-JAM in direct ELISAs. Detects human and mouse JAM-B/VE-JAM in Western blots.      |
| <b>Source</b>                                                                                                                                                                                           | Polyclonal Goat IgG                                                                                      |
| <b>Purification</b>                                                                                                                                                                                     | Antigen Affinity-purified                                                                                |
| <b>Immunogen</b>                                                                                                                                                                                        | Mouse myeloma cell line NS0-derived recombinant human JAM-B/VE-JAM<br>Phe29-Asn236<br>Accession # P57087 |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 647<br>Excitation Wavelength: 650 nm<br>Emission Wavelength: 668 nm                          |
| <b>Formulation</b>                                                                                                                                                                                      | 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.

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| <b>Neutralization</b>       | Optimal dilution of this antibody should be experimentally determined. |
| <b>Western Blot</b>         | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunohistochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

#### PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

#### 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 cells or epithelial cells. Some family members are also found on blood leukocytes and platelets. JAM-B, alternatively named vascular endothelial JAM (VE-JAM), is expressed prominently on high endothelial venules of lymphoid organs where it is localized to the intercellular boundaries of high endothelial cells. It is also expressed on the endothelium of a variety of non-lymphoid organs, especially the heart and placenta (3, 5). Human JAM-B cDNA predicts a 298 amino acid residue (aa) precursor protein with a putative 28 aa signal peptide, a 209 aa extracellular region containing two Ig domains, a 23 aa transmembrane domain and a 38 aa cytoplasmic domain containing a PDZ-binding motif and a PKC phosphorylation site. Human JAM-B shares approximately 79% aa sequence homology with its mouse homologue. It also shares approximately 35% aa sequence homology with human JAM-A or JAM-C. JAM-B exhibits homotypic interactions, as well as heterotypic interactions with JAM-C, but not JAM-A (4, 5, 7). It is also a ligand for the integrin  $\alpha_4\beta_1$ . However, the JAM-B/ $\alpha_4\beta_1$  interaction is facilitated only after prior adhesion of JAM-B to JAM-C (6). Through its heterotypic interactions with JAM-C, JAM-B is an adhesive ligand for T, NK, and dendritic cells, and may play a role in regulating leukocyte transmigration (5).

*The nomenclature used for the JAM family proteins is confusing. VE-JAM has been referred in the literature variously as JAM-B or JAM-3. Until further clarification, R&D Systems has adopted the nomenclature where both mouse and human VE-JAM are referred to as JAM-B.*

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