Mouse JAM-C Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1213

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse JAM-C in direct ELISAs and Western blots. In Western blots, approximately 5% cross-reactivity with recombinant human JAM-C and less than 2% cross-reactivity with recombinant mouse (rm) JAM-A and rmJAM-B is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse JAM-C Val32-Asn241 Accession # Q9D8B7
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

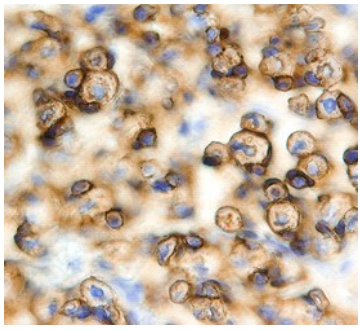
APPLICATIONS

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 Mouse JAM-C Fc Chimera (Catalog # 1213-J3)
Immunocytochemistry	5-15 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below
Blockade of Receptor-ligand Interaction	In a functional ELISA, 3-15 µg/mL of this antibody will block 50% of the binding of 10 ng/mL of biotinylated Recombinant Mouse VEJAM to immobilized Recombinant Mouse JAM-C (Catalog # 1213-J3) coated at 2 µg/mL (100 µL/well). At 30 µg/mL, this antibody will block >90% of the binding.	

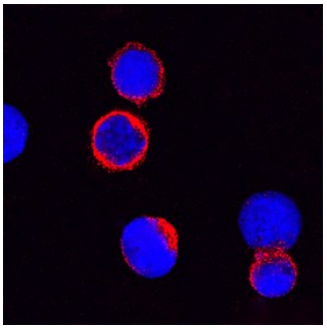
DATA

Immunohistochemistry



JAM-C in Mouse Embryo. JAM-C was detected in immersion fixed frozen sections of mouse embryo (15 d.p.c.) using Goat Anti-Mouse JAM-C Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1213) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to muscle cells. View our protocol for Chromogenic IHC Staining of Frozen Tissue Sections.

Immunocytochemistry



JAM-C in Mouse Splenocytes. JAM-C was detected in immersion fixed mouse splenocytes using Goat Anti-Mouse JAM-C Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1213) at 15 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

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. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 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.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956

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BACKGROUND

The family of junctional adhesion molecules (JAM), comprised of 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. Mouse JAM-C cDNA predicts a 310 amino acid (aa) residue precursor protein with a putative 31 aa signal peptide, a 210 aa extracellular region containing two Ig domains, an 18 aa transmembrane domain and a 51 aa cytoplasmic domain containing a PDZ-binding motif and a PKC phosphorylation site (3). Mouse JAM-C shares 86% aa sequence identity with its human homologue. It also shares approximately 31% and 35% aa sequence homology with mouse JAM-A and JAM-B, respectively (2). Mouse JAM-C is highly expressed during embryogenesis. In adult tissues, mouse JAM-C is restricted to endothelial cells, lymph endothelial cells in the kidney, lymph node and Peyer's patches where the protein can be localized to the high endothelial venules (3). Although human JAM-C is expressed on human platelets and a subset of leukocytes, mouse JAM-C expression was not detected on any mouse lymphocytes (4). In contrast to human JAM-C which show weak homotypic interactions, mouse JAM-C was reported to exhibit homotypic interactions (3). Mouse JAM-C has also been shown to have heterotypic interaction with JAM-B. It is likely that mouse JAM-C may play a role in lymphocyte transendothelial migration (4).

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

References:

1. Chavakis, T. *et al.* (2003) Thromb. Haemost. **89**:13.
2. Aurrand-Lions, M. *et al.* (2001) Blood **98**:3699.
3. Aurrand-Lions, M. *et al.* (2001) J. Biol. Chem. **276**:2733.
4. Johnson-Leger, C. *et al.* (2002) Blood **100**:25793.

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bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956