

JAM-A (BV12): sc-52688

BACKGROUND

Junctional adhesion molecule (JAM) is a member of the immunoglobulin superfamily expressed in tight junctions of epithelial cells and endothelial cells. It is implicated in transendothelial migration of leukocytes. JAM is constitutively expressed on circulating monocytes, neutrophils, lymphocytes subsets and platelets. The JAM family consists of JAM-A, JAM-B and JAM-C, alternatively designated JAM-1, JAM-2 and JAM-3, respectively. JAM-A localizes with F-Actin at the cell-cell contacts and at the membrane ruffles. It is involved in cell to cell adhesion through homophilic interactions and plays a role in the organization of tight junctions and modulation of leukocyte extravasation. JAM-B interacts with discrete subsets of PBLs, suggesting that it may play a role in lymphocyte trafficking. JAM-B and JAM-C proteins are binding partners; JAM-C may be a functional JAM-B receptor. Specifically, JAM-B adheres to T cells through heterotypic interactions with JAM-C. The JAM-B/JAM-C interaction may play a role in T, NK and dendritic cellular inflammation.

REFERENCES

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- Ebnet, K., et al. 2000. Junctional adhesion molecule interacts with the PDZ domain-containing proteins AF-6 and ZO-1. *J. Biol. Chem.* 275: 27979-27988.
- Dejana, E., et al. 2000. The molecular organization of endothelial junctions and their functional role in vascular morphogenesis and permeability. *Int. J. Dev. Biol.* 44: 743-748.
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- Arrate, M.P., et al. 2001. Cloning of human junctional adhesion molecule 3 (JAM-3) and its identification as the JAM-2 counter-receptor. *J. Biol. Chem.* 276: 45826-45832.
- Liang, T.W., et al. 2002. Vascular endothelial-junctional adhesion molecule (VE-JAM)/JAM-2 interacts with T, NK, and dendritic cells through JAM-3. *J. Immunol.* 168: 1618-1626.
- Johnson-Leger, C.A., et al. 2002. Junctional adhesion molecule-2 (JAM-2) promotes lymphocyte transendothelial migration. *Blood* 100: 2479-2486.

CHROMOSOMAL LOCATION

Genetic locus: F11r (mouse) mapping to 1 H3.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

SOURCE

JAM-A (BV12) is a rat monoclonal antibody raised against H5V endothelial cells of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

JAM-A (BV12) is available conjugated to fluorescein (sc-52688 FITC), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

JAM-A (BV12) is recommended for detection of JAM-A of mouse origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1 x 10⁶ cells); non cross-reactive with other JAM family members.

Suitable for use as control antibody for JAM-A siRNA (m): sc-43140, JAM-A shRNA Plasmid (m): sc-43140-SH and JAM-A shRNA (m) Lentiviral Particles: sc-43140-V.

Molecular Weight of JAM-A: 36 kDa.

SELECT PRODUCT CITATIONS

- Lelouard, H., et al. 2012. Peyer's patch dendritic cells sample antigens by extending dendrites through M cell-specific transcellular pores. *Gastroenterology* 142: 592-601.
- Erba, B.G., et al. 2017. Endothelial-to-mesenchymal transition in bone marrow and spleen of primary myelofibrosis. *Am. J. Pathol.* 187: 1879-1892.
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- Liang, X., et al. 2022. E-cadherin mediates apical membrane initiation site localisation during *de novo* polarisation of epithelial cavities. *EMBO J.* E-published.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.



See **JAM-A (J10.4): sc-53623** for JAM-A antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.