SANTA CRUZ BIOTECHNOLOGY, INC.

JAM-A (H202-106): sc-59845

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 my play a role in T, NK and dendritic cellular inflammation.

REFERENCES

1. Martin-Padura, I., et al. 1998. Junctional adhesion molecule, a novel member of the immunoglobulin superfamily that distributes at intercellular junctions and modulates monocyte transmigration. J. Cell Biol. 142: 117-127.
2. Ozaki, H., et al. 1999. Cutting edge: combined treatment of TNFα and IFN-γ causes redistribution of junctional adhesion molecule in human endothelial cells. J. Immunol. 163: 553-557.
3. Ozaki, H., et al. 2000. Junctional adhesion molecule (JAM) is phosphorylated by protein kinase C upon platelet activation. Biochem. Biophys. Res. Commun. 276: 873-878.
4. 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.
5. Dejana, E., et al. 2000. The molecular organization of endothelial junctions and their funcitonal role in vascular morphogenesis and permeability. Int. J. Dev. Biol. 44: 743-748.
6. Bazzoni, G., et al. 2000. Homophilic interaction of junctional adhesion molecule. J. Biol. Chem. 275: 30970-30976.
7. 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.
8. 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.
9. 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 (H202-106) is a rat monoclonal antibody raised against JAM-A from MTE1/MTE2 stromal cell lines of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

JAM-A (H202-106) is available conjugated to either phycoerythrin (sc-59845 PE) or fluorescein (sc-59845 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

JAM-A (H202-106) is recommended for detection of JAM-A of mouse origin by immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

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

1. Fededa, J.P., et al. 2016. MicroRNA-34/449 controls mitotic spindle orientation during mammalian cortex development. EMBO J. 35: 2386-2398.
2. Tian, Y., et al. 2020. MicroRNA-124 inhibits stem-like properties and enhances radiosensitivity in nasopharyngeal carcinoma cells via direct repression of expression of JAMA. J. Cell. Mol. Med. 24: 9533-9544.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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