SANTA CRUZ BIOTECHNOLOGY, INC.

JAM-A (J3F.1): sc-53622

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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, lymphocyte 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.

CHROMOSOMAL LOCATION

Genetic locus: F11R (human) mapping to 1q23.3.

SOURCE

JAM-A (J3F.1) is a mouse monoclonal antibody raised against recombinant JAM fusion protein of human origin.

PRODUCT

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

JAM-A (J3F.1) is available conjugated to either phycoerythrin (sc-53622 PE) or fluorescein (sc-53622 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

JAM-A (J3F.1) is recommended for detection of JAM-A of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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), immunohistochemistry (including paraffin-embedded sections) (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 (h): sc-43139, JAM-A shRNA Plasmid (h): sc-43139-SH and JAM-A shRNA (h) Lentiviral Particles: sc-43139-V.

Molecular Weight of JAM-A: 36 kDa.

Positive Controls: human platelet extract: sc-363773, human PBL whole cell lysate or T84 whole cell lysate: sc-364797.

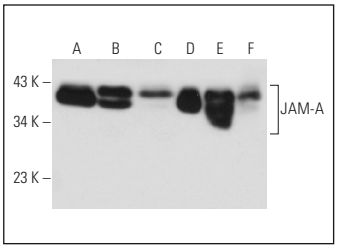
STORAGE

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

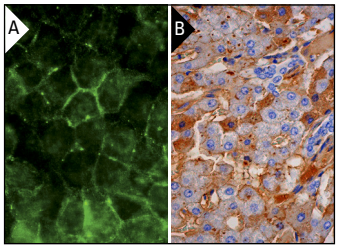
RESEARCH USE

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

DATA



JAM-A (J3F.1): sc-53622. Western blot analysis of JAM-A expression in human platelet extract (**A**,**D**) and human PBL (**B**,**E**) and T84 (**C**,**F**) whole cell lysates under reducing (**A**,**B**,**C**) and non-reducing (**D**,**E**,**F**) conditions.



JAM1 (J3F.1): sc-53622. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing membrane and cytoplasmic staining of hepatocytes (**B**).

SELECT PRODUCT CITATIONS

1. Man, S., et al. 2009. α4 Integrin/FN-CS1 mediated leukocyte adhesion to brain microvascular endothelial cells under flow conditions. J. Neuroimmunol. 210: 92-99.
2. Dental, C., et al. 2016. HIV-1 latency-reversing agents prostratin and bryostatin-1 induce blood-brain barrier disruption/inflammation and modulate leukocyte adhesion/transmigration. J. Immunol. 198: 1229-1241.
3. Nierwinska, K., et al. 2019. The effect of endurance training and testosterone supplementation on the expression of blood spinal cord barrier proteins in rats. PLoS ONE 14: e0211818.
4. Solimando, A.G., et al. 2021. Halting the vicious cycle within the multiple myeloma ecosystem: blocking JAM-A on bone marrow endothelial cells restores the angiogenic homeostasis and suppresses tumor progression. Haematologica 106: 1943-1956.
5. Gong, T., et al. 2022. Lentivirus-mediated subcutaneous JAM-A modification promotes skin wound healing in a mouse model by strengthening the secretory function and proliferation of fibroblasts. Cell Biol. Int. E-published.

PROTOCOLS

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

CONJUGATES

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.