SANTA CRUZ BIOTECHNOLOGY, INC.

JAM-A (J10.4): sc-53623

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

CHROMOSOMAL LOCATION

Genetic locus: F11R (human) mapping to 1q23.3; F11r (mouse) mapping to 1 H3.

SOURCE

JAM-A (J10.4) 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 (J10.4) is available conjugated to agarose (sc-53623 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-53623 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53623 PE), fluorescein (sc-53623 FITC), Alexa Fluor® 488 (sc-53623 AF488), Alexa Fluor® 546 (sc-53623 AF546), Alexa Fluor® 594 (sc-53623 AF594) or Alexa Fluor® 647 (sc-53623 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53623 AF680) or Alexa Fluor® 790 (sc-53623 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

JAM-A (J10.4) is recommended for detection of JAM-A of mouse, rat and 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) 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 siRNA (m): sc-43140, JAM-A shRNA Plasmid (h): sc-43139-SH, JAM-A shRNA Plasmid (m): sc-43140-SH, JAM-A shRNA (h) Lentiviral Particles: sc-43139-V and JAM-A shRNA (m) Lentiviral Particles: sc-43140-V.

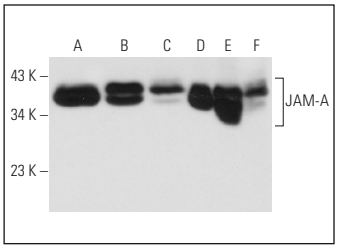
Molecular Weight of JAM-A: 36 kDa.

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

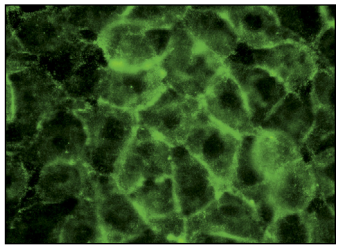
STORAGE

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

DATA



JAM-A (J10.4): sc-53623. 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.



JAM-A (J10.4): sc-53623. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. McSherry, E.A., et al. 2011. Breast cancer cell migration is regulated through junctional adhesion molecule-A-mediated activation of Rap1 GTPase. Breast Cancer Res. 13: R31.
2. Brennan, K., et al. 2013. Junctional adhesion molecule-A is co-expressed with HER2 in breast tumors and acts as a novel regulator of HER2 protein degradation and signaling. Oncogene 32: 2799-804.
3. Kohler, E.E., et al. 2014. Low-dose 6-bromoindirubin-3'-oxime induces partial dedifferentiation of endothelial cells to promote increased neovascularization. Stem Cells 32: 1538-1552.
4. Carvallo, L., et al. 2015. Buprenorphine decreases the CCL2-mediated chemotactic response of monocytes. J. Immunol. 194: 3246-3258.
5. Scott, D.W., et al. 2016. Tension on JAM-A activates RhoA via GEF-H1 and p115 RhoGEF. Mol. Biol. Cell 27: 1420-1430.
6. Dautzenberg, I.J.C., et al. 2017. Baculovirus-assisted reovirus infection in monolayer and spheroid vultures of glioma cells. Sci. Rep. 7: 17654.
7. Bar, I., et al. 2018. Silencing of casein kinase 1δ reduces migration and metastasis of triple negative breast cancer cells. Oncotarget 9: 30821-30836.
8. Lenin, R., et al. 2019. GRP78 translocation to the cell surface and O-GlcNAcylation of VE-cadherin contribute to ER stress-mediated endothelial permeability. Sci. Rep. 9: 10783.
9. Samson, A.L., et al. 2020. MLKL trafficking and accumulation at the plasma membrane control the kinetics and threshold for necroptosis. Nat. Commun. 11: 3151.

RESEARCH USE

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