SANTA CRUZ BIOTECHNOLOGY, INC.

JAM-A (1H2A9): sc-53624

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.

SOURCE

JAM-A (1H2A9) is a mouse monoclonal antibody raised against recombinant JAM fusion protein of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

JAM-A (1H2A9) is available conjugated to agarose (sc-53624 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-53624 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53624 PE), fluorescein (sc-53624 FITC), Alexa Fluor® 488 (sc-53624 AF488), Alexa Fluor® 546 (sc-53624 AF546), Alexa Fluor® 594 (sc-53624 AF594) or Alexa Fluor® 647 (sc-53624 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53624 AF680) or Alexa Fluor® 790 (sc-53624 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

JAM-A (1H2A9) 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) 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.

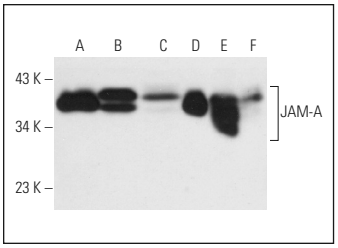
Molecular Weight of JAM-A: 36 kDa.

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

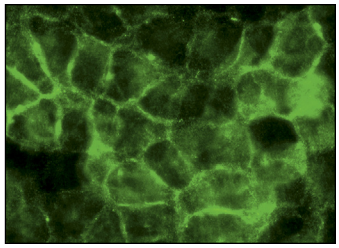
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



JAM-A (1H2A9): sc-53624. 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 (1H2A9): sc-53624. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Heiskanen, T.J., et al. 2009. Epilysin (MMP-28) is deposited to the basolateral extracellular matrix of epithelial cells. Matrix Biol. 28: 74-83.
2. Twigger, K., et al. 2012. Reovirus exerts potent oncolytic effects in head and neck cancer cell lines that are independent of signalling in the EGFR pathway. BMC Cancer 12: 368.
3. Scott, D.W., et al. 2015. N-glycosylation controls the function of junctional adhesion molecule-A. Mol. Biol. Cell 26: 3205-3214.
4. Zhao, X., et al. 2017. Cytokine-induced killer cell delivery enhances the antitumor activity of oncolytic reovirus. PLoS ONE 12: e0184816.
5. Rocha, S., et al. 2019. 3D cellular architecture affects microRNA and protein cargo of extracellular vesicles. Adv. Sci. 6: 1800948.
6. Wijshake, T., et al. 2021. Tumor-suppressor function of Beclin 1 in breast cancer cells requires E-cadherin. Proc. Natl. Acad. Sci. USA 118: e2020478118.
7. Hoffman, R.K., et al. 2021. Damage to cardiac vasculature may be associated with breast cancer treatment-induced cardiotoxicity. Cardiooncology 7: 15.

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.