

JAM-A (1H2A9): sc-53624

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 10⁶ 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.

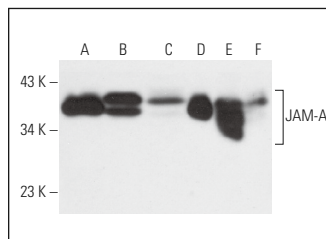
Molecular Weight of JAM-A: 36 kDa.

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

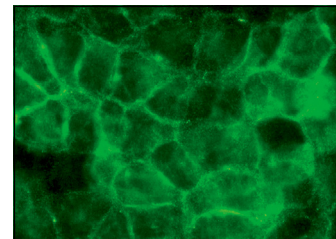
STORAGE

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

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. 2018. 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.
8. Lee, E., et al. 2023. A 3D biomimetic model of lymphatics reveals cell-cell junction tightening and lymphedema via a cytokine-induced ROCK2/JAM-A complex. *Proc. Natl. Acad. Sci. USA* 120: e2308941120.

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.