SANTA CRUZ BIOTECHNOLOGY, INC.

JAM-C (13Y07): sc-80134

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. Bazzoni, G., et al. 2000. Homophilic interaction of junctional adhesion molecule. J. Biol. Chem. 275: 30970-30976.
6. 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.

CHROMOSOMAL LOCATION

Genetic locus: JAM3 (human) mapping to 11q25.

SOURCE

JAM-C (13Y07) is a mouse monoclonal antibody raised against the extracellular domain of JAM-C of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and protein stabilizer. Also available azide-free for neutralization, sc-80134 L, 100 µg/0.1 ml.

APPLICATIONS

JAM-C (13Y07) is recommended for detection of JAM-C of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)]; non cross-reactive with JAM-A.

Suitable for use as control antibody for JAM-C siRNA (h): sc-43872, JAM-C shRNA Plasmid (h): sc-43872-SH and JAM-C shRNA (h) Lentiviral Particles: sc-43872-V.

Molecular Weight (predicted) of JAM-C: 35 kDa.

Molecular Weight (observed) of JAM-C: 38 kDa.

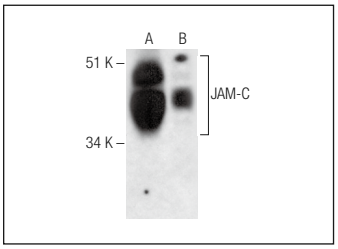
Molecular Weight of glycosylated JAM-C: 43-48 kDa.

Positive Controls: JAR cell lysate: sc-2276, HUV-EC-C whole cell lysate: sc-364180 or Jurkat whole cell lysate: sc-2204.

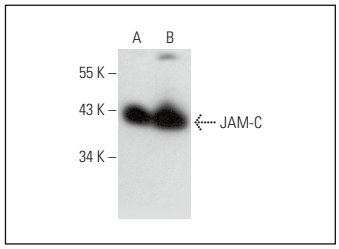
RECOMMENDED SUPPORT REAGENTS

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).

DATA



JAM-C (13Y07): sc-80134. Western blot analysis of JAM-C expression in human platelet extract (**A**) and Jurkat (**B**) whole cell lysate.



JAM-C (13Y07): sc-80134. Western blot analysis of JAM-C expression in HUV-EC-C (**A**) and JAR (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Zhou, D., et al. 2019. JAM-3 functions as a novel tumor suppressor and is inactivated by DNA methylation in colorectal cancer. Cancer Manag. Res. 11: 2457-2470.
2. Peng, J., et al. 2024. JAM3 promotes cervical cancer metastasis by activating the HIF-1α/VEGFA pathway. BMC Womens Health 24: 293.

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.