

# JAM-B (1G4): sc-293496

## 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.

## REFERENCES

- 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.
- Ozaki, H., et al. 1999. Cutting edge: combined treatment of TNF- $\alpha$  and IFN- $\gamma$  causes redistribution of junctional adhesion molecule in human endothelial cells. *J. Immunol.* 163: 553-557.
- 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.
- 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.
- Dejana, E., et al. 2000. The molecular organization of endothelial junctions and their functional role in vascular morphogenesis and permeability. *Int. J. Dev. Biol.* 44: 743-748.

## CHROMOSOMAL LOCATION

Genetic locus: JAM2 (human) mapping to 21q21.3.

## SOURCE

JAM-B (1G4) is a mouse monoclonal antibody raised against amino acids 29-298 representing full length JAM-B of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

JAM-B (1G4) is recommended for detection of JAM-B of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for JAM-B siRNA (h): sc-43141, JAM-B shRNA Plasmid (h): sc-43141-SH and JAM-B shRNA (h) Lentiviral Particles: sc-43141-V.

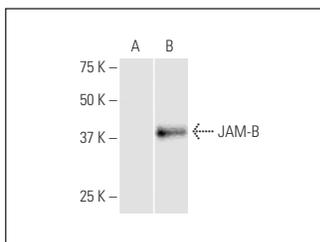
Molecular Weight of JAM-B: 54 kDa.

Positive Controls: JAM-B transfected 293T whole cell lysate.

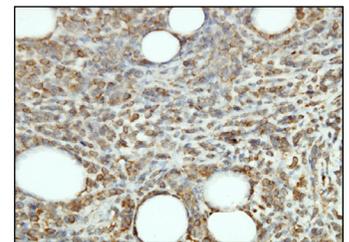
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



JAM-B (1G4): sc-293496. Western blot analysis of JAM-B expression in non-transfected (A) and JAM-B transfected (B) 293T whole cell lysates.



JAM-B (1G4): sc-293496. Immunoperoxidase staining of formalin fixed, paraffin-embedded human malignant lymphoma, diffuse large B tissue showing membrane staining of tumor cells.

## SELECT PRODUCT CITATIONS

- Miranda, J., et al. 2019. Syncytiotrophoblast of placenta from women with Zika virus infection has altered tight junction protein expression and increased paracellular permeability. *Cells* 8: 1174.
- Day-Walsh, P.E., et al. 2022. Transcriptional and post-translational regulation of junctional adhesion molecule-B (JAM-B) in leukocytes under inflammatory stimuli. *Int. J. Mol. Sci.* 23: 8646.

## RESEARCH USE

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