

p-JAM-A (Ser 284)-R: sc-17430-R

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. JAM-A is able to homodimerize and form clusters at several sites of cell-cell contact in aggregated platelets. Upon platelet activation, JAM-A is phosphorylated by protein kinase C at Serine 284.

REFERENCES

1. Martin-Padura, I., et al. 1998. Junctional adhesion molecule, a novel member of the immunoglobulin superfamily that distribution at intercellular junctions and modulates monocyte. *J. Cell Biol.* 142: 117-127.
2. Ozaki, H., et al. 1999. Cutting edge: combined treatment of TNF α and IFN- γ causes redistribution of junctional adhesion molecule in human endothelial cells. *J. Immunol.* 163: 553-557.
3. 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.
4. 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.
5. 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.
6. Bazzoni, G., et al. 2000. Homophilic interaction of junctional adhesion molecule. *J. Biol. Chem.* 275: 30970-30976.
7. Barton, E.S., et al. 2001. Junction adhesion molecule is a receptor for reovirus. *Cell* 104: 441-451.
8. Naik, U.P., et al. 2001. Characterization and chromosomal localization of JAM1, a platelet receptor for a stimulatory monoclonal antibody. *J. Cell Sci.* 114: 539-547.

CHROMOSOMAL LOCATION

Genetic locus: F11R (human) mapping to 1q23.3.

RESEARCH USE

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

SOURCE

p-JAM-A (Ser 284)-R is a rabbit polyclonal antibody raised against a short amino acid sequence containing Ser 284 phosphorylated JAM-A of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-17430 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

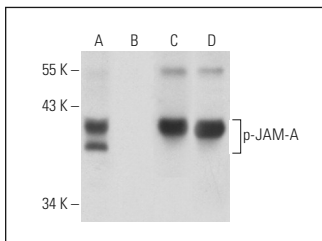
p-JAM-A (Ser 284)-R is recommended for detection of Ser 284 phosphorylated JAM-A of human origin and correspondingly Ser 285 phosphorylated JAM-A of rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (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-A siRNA (h): sc-43139, JAM-A shRNA Plasmid (h): sc-43139-SH and JAM-A shRNA (h) Lentiviral Particles: sc-43139-V.

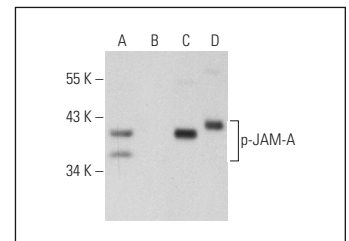
Molecular Weight of p-JAM-A: 32-35 kDa.

Positive Controls: human platelet extracts: sc-363773.

DATA



Western blot analysis of JAM-A phosphorylation in untreated (A,C) and lambda protein phosphatase treated (B,D) human platelet extracts. Antibodies tested include p-JAM-A (Ser 284)-R: sc-17430-R (A,B) and JAM-A (H-80): sc-25329 (C,D).



Western blot analysis of JAM-A phosphorylation in untreated (A,C), and lambda protein phosphatase treated (B,D) human platelet extracts. Antibodies tested include p-JAM-A (Ser 284)-R: sc-17430-R (A,B) and JAM-A (H-80): sc-25629 (C,D).

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.