Human Junctional Adhesion Molecule-1 (JAM-1)
Clone M.Ab.F11
Cat. No. MNS-MON 3053

Specificity
Junctional adhesion molecule-1 (JAM-1) also known as the human platelet F11-Receptor (F11R) is a cell adhesion molecule (CAM). JAM-1 is a member of the immunoglobulin superfamily found on the surface of human platelets and at intercellular junctions of endothelial cells and epithelial cells. JAM-1 belongs together with JAM-2 and JAM-3 to a family of adhesion proteins with a V-C2 immunoglobulin domain organization. JAM plays an important role in tight junctions where it is involved in cell-to-cell adhesion through homophilic interaction. It codistributes with other tight junction components as ZO-1, 7H6 antigen, cingulin and occludin. JAM-1 plays a role in platelet aggregation, secretion, adhesion, spreading.

In the platelet F11R/Jam-1 is a membrane protein involved in 2 distinct processes initiated on the platelet surface. Antibody-induced platelet aggregation and secretion both dependent on FcgammaRII and GPIIb/IIIa integrin, a process that may be involved in pathophysiological processes associated with certain thrombocytopenias. Antibody mediated platelet adhesion independent from FcgammaRII or fibrinogen receptor and that appears to play a role in physiological processes associated with platelet adhesion and aggregation. A physiological role for the F11R/Jam-1 protein was demonstrated by its phosphorylation after the stimulation of platelets by thrombin and collagen. A pathophysiological role for the F11R/Jam-1 was revealed by demonstrating the presence of F11R/Jam-1 antibodies in patients with thrombocytopenia. Adhesion of platelets through the F11R resulted in events characteristic of the action of cell adhesion molecules (CAMs). Recent data suggests a role for F11R/Jam-1 in the adhesion of platelets to cytokine-inflamed endothelial cells and thus in thrombosis and atherosclerosis induced in non-denuded blood vessels by inflammatory processes.

Immunoglobulin type
Mouse IgG1

Use
The antibody can be used for flow cytometry, Western blotting and immuno precipitation. Furthermore the antibody is useful for functional studies. The antibody directly stimulates the aggregation and granule secretion of human platelets.

Instructions for Use
For flow cytometry and Western blotting dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:10.

Presentation
1 ml (100 µg/ml) 0.2 µm filtered sterile antibody solution in PBS, containing 0.1% bovine serum albumin.
Literature

Storage and Handling
Product should be stored at 4°C. Under recommended storage conditions, product is stable for one year.

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