MONOCLONAL ANTIBODY TO HUMAN JUNCTIONAL ADHESION MOLECULE-A (JAM-A)
clone M.Ab.F11

Catalog nr
HM2099 (lot number and expiry date are indicated on the label)

Description
The monoclonal antibody M.Ab.F11 recognizes junctional adhesion molecule-A (JAM-A) also known as the human platelet F11-Receptor (F11R) and JAM-1 is a cell adhesion molecule (CAM). JAM-A 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-A belongs together with JAM-C (JAM-2) and JAM-B (VE-JAM or 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-A plays a role in platelet aggregation, secretion, adhesion, spreading.
In the platelet F11R/JAM-A 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-A protein was demonstrated by its phosphorylation after the stimulation of platelets by thrombin and collagen. A pathophysiological role for the F11R/JAM-A was revealed by demonstrating the presence of F11R/JAM-A 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-A 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.

Species
Mouse IgG_1

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

Application
The monoclonal antibody M.Ab.F11 can be used for immunofluorescence, flow cytometry, Western blotting and immuno precipitation. Furthermore the monoclonal antibody M.Ab.F11 is useful for functional studies. The antibody directly stimulates the aggregation and granule secretion of human platelets.

Use
For immunofluorescence, 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 1:50.

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

Precautions
For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and Federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result with the use of or derivation of this product.

References

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2. Walkowisk B et al; Preferred use of primary radiolabeled anti-platelet monoclonal antibodies. Comparison of immunoblotting methods for the analysis of functional domains on human platelets. Thromb Res 1992, *68*: 323
3. Naik, U et al; Mechanisms of platelet activation by a stimulatory antibody: cross-linking of a novel platelet receptor for monoclonal antibody F11 with the Fc gamma RII receptor. Biochem J 1995, *310*: 155
4. Wang, F et al; Stimulatory antibody-induced activation and selective translocation of protein kinase C isoenzymes in human platelets. Biochem J 1995, *311*: 401
5. Sobocka, M et al; Cloning of the human platelet F11 receptor: a cell adhesion molecule member of the immunoglobulin superfamily involved in platelet aggregation. Blood 2000, *95*: 2600
6. Babinska, A et al; Two regions of the human platelet F11-receptor (F11R) are critical for platelet aggregation, potentiation and adhesion. Thromb Haemost 2002, *87*: 712

Also available

HM2102	Monoclonal antibody against Human 7H6 antigen, clone 7H6
HM2099	Monoclonal antibody against Human JAM-A (JAM-1), clone M.Ab.F11
HP9041	Polyclonal antibody against Human JAM-A (JAM-1), extracellular domain 1
HP9042	Polyclonal antibody against Human JAM-A (JAM-1), extracellular domain 2