abcam

ab270446

Anti-Junctional Adhesion Molecule 1/JAM-A antibody [EPR23246-275]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR23246-275
Purification technique	Affinity purification Protein A
Concentration	0.653 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Mouse
Dilution info	1/30
Notes	-

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Mouse
Dilution info	1/600
Notes	-

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/50
Notes	-

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information F11R

Function	Seems to play a role in epithelial tight junction formation. Appears early in primordial forms of cell junctions and recruits PARD3 (PubMed:11489913). The association of the PARD6-PARD3 complex may prevent the interaction of PARD3 with JAM1, thereby preventing tight junction assembly (By similarity). Plays a role in regulating monocyte transmigration involved in integrity of epithelial barrier (By similarity). Ligand for integrin alpha-L/beta-2 involved in memory T-cell and neutrophil transmigration (PubMed:11812992). Involved in platelet activation (PubMed:10753840). (Microbial infection) Acts as a receptor for Mammalian reovirus sigma-1. (Microbial infection) Acts as a receptor for Human Rotavirus strain Wa.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks

Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Junctional Adhesion Molecule 1 also known as JAM-A or JAM-A protein is a member of the immunoglobulin superfamily. It has a mass of roughly 32 kDa. This molecule functions in tight junctions of epithelial and endothelial cells playing an important role in regulating paracellular permeability. JAM-A is expressed in tissues where tight junctions are present including the skin gastrointestinal tract and endothelia throughout the body.
Biological function summary	JAM-A functions as a cell adhesion molecule influencing processes like leukocyte transmigration and epithelial barrier formation. It does not act alone but rather forms complexes with other proteins at cell junctions. JAM-A interacts with other junctional proteins like occludin and claudins contributing to the structure and function of tight junctions.
Pathways	JAM-A participates in cellular processes involving inflammation and cell migration. It is an integral part of the signal transduction pathways that regulate leukocyte migration an important aspect of immune response. JAM-A is also associated with G-protein coupled receptors in these pathways highlighting its role in regulating intracellular signaling that affects cell adhesion and migration.

Associated diseases and disorders	JAM-A has connections with cancer progression and cardiovascular diseases. Its overexpression has been linked to several cancers including breast cancer due to its role in enhancing cell migration and invasion. In cardiovascular diseases JAM-A interacts with platelet-endothelial cell adhesion molecule-1 (PECAM-1) influencing the inflammatory response within vascular tissues. Understanding these interactions can aid in developing therapeutic strategies targeting JAM-A in related diseases.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

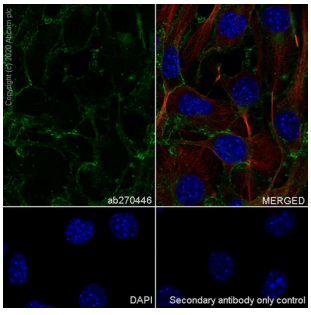
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

6 product images

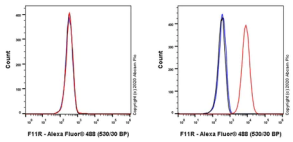


Immunocytochemistry/ Immunofluorescence - Anti-Junctional Adhesion Molecule 1/JAM-A antibody [EPR23246-275] (ab270446)

Junctional Adhesion Molecule 1/JAM-A Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Junctional Adhesion Molecule 1/JAM-A antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized bEnd.3 cells labelling Junctional Adhesion Molecule 1/JAM-A with ab270446 at 1/50 dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing membranous staining in bEnd.3 cell line ab195889 Anti-alpha Tubulin antibody (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The

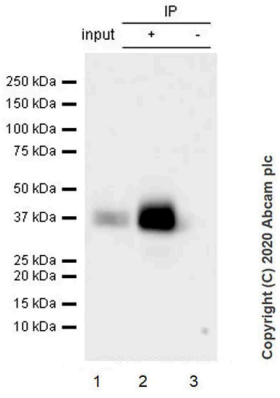
Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1000 dilution.



Flow Cytometry - Anti-Junctional Adhesion Molecule 1/JAM-A antibody [EPR23246-275] (ab270446)

Junctional Adhesion Molecule 1/JAM-A Flow Cytometry staining using rabbit Anti-Junctional Adhesion Molecule 1/JAM-A antibody

Flow cytometric analysis of Neuro-2a (Mouse neuroblastoma neuroblast, Left) / bEnd.3 (Mouse brain endothelioma, Right) cells labelling Junctional Adhesion Molecule 1/JAM-A with ab270446 at 1/600 dilution (0.1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody. Gated on viable cells.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab270446).



Immunoprecipitation - Anti-Junctional Adhesion Molecule 1/JAM-A antibody [EPR23246-275] (ab270446)

Junctional Adhesion Molecule 1/JAM-A was immunoprecipitated from 0.35 mg bEnd.3 (mouse brain endothelioma), whole cell lysate with ab270446 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab270446 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP)(ab131366) was used at 1/5000 dilution.
Lane 1: bEnd.3 (mouse brain endothelioma), whole cell lysate 10 ug

Lane 2: ab270446 IP in bEnd.3 whole cell lysate

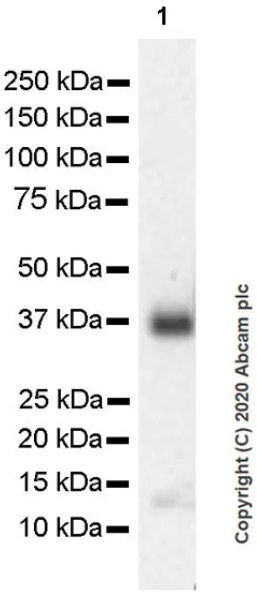
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab270446 in bEnd.3 whole cell lysate

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 10 seconds

All lanes:
Immunoprecipitation - Anti-Junctional Adhesion Molecule 1/JAM-A antibody [EPR23246-275] (ab270446)

Predicted band size: 32 kDa



Western blot - Anti-Junctional Adhesion Molecule 1/JAM-A antibody [EPR23246-275] (ab270446)

Junctional Adhesion Molecule 1/JAM-A Western blot staining of RAW264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage), whole cell lysate using rabbit Anti-Junctional Adhesion Molecule 1/JAM-A antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST
Bands of 35Da and 32KDa respectively represent the glycosylated form and non-glycosylated form.

The expression profile: molecular weight observed is consistent with what has been described in the literature (PMID: 10753840, 10698320).

Exposure time: 3 minutes

All lanes:
Western blot - Anti-Junctional Adhesion Molecule 1/JAM-A antibody [EPR23246-275] (ab270446) at 1/1000 dilution

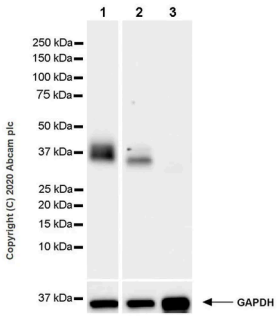
All lanes:
RAW264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage), whole cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/20000 dilution

Predicted band size: 32 kDa

Observed band size: 35 kDa



Western blot - Anti-Junctional Adhesion Molecule 1/JAM-A antibody [EPR23246-275] (ab270446)

Blocking and diluting buffer and concentration: 5% NFDM/TBST
Bands of 35Da and 32KDa respectively represent the glycosylated form and non-glycosylated form.

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 10753840, 10698320).

Negative control: brain (PMID: 10698320).

Exposure time: 10 seconds

All lanes:
Western blot - Anti-Junctional Adhesion Molecule 1/JAM-A antibody [EPR23246-275] (ab270446) at 1/1000 dilution

Lane 1:
bEnd.3 (mouse brain endothelioma), whole cell lysate at 20 µg

Lane 2:
Mouse testis tissue lysate at 20 µg

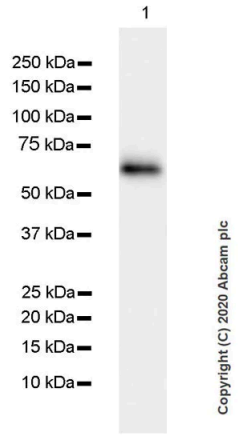
Lane 3:
Mouse brain tissue lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/20000 dilution

Predicted band size: 32 kDa

Observed band size: 32 kDa, 35 kDa



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Western blot - Anti-Junctional Adhesion Molecule 1/JAM-A antibody [EPR23246-275] (ab270446)

Blocking and diluting buffer and concentration: 5% NFDM/TBST
Exposure time: 10 seconds

All lanes:
Western blot - Anti-Junctional Adhesion Molecule 1/JAM-A antibody [EPR23246-275] (ab270446) at 1/1000 dilution

All lanes:
Recombinant Mouse JAM-A Fc Chimera Protein (aa27-242)

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/100000 dilution

Predicted band size: 32 kDa

Observed band size: 53 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.