abcam

ab323936

PE Anti-VCAM1 antibody [EPR27027-79]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	PE
Excitation/Emission	Ex: 480;565nm, Em: 578nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR27027-79
Purification technique	Affinity purification Protein A
Specificity	Unsuitable for mouse ICC.
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human

Dilution info	1/2500
Notes	-

Species	Mouse
Dilution info	1/2500
Notes	-

ICC/IF

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information VCAM1

Function Cell adhesion glycoprotein predominantly expressed on the surface of endothelial cells that plays an important role in immune surveillance and inflammation (PubMed:31310649). Acts as a major regulator of leukocyte adhesion to the endothelium through interaction with different types of integrins (PubMed:10209034). During inflammatory responses, binds ligands on the surface of activated endothelial cells to initiate the activation of calcium channels and the plasma membrane-associated small GTPase RAC1 leading to leukocyte transendothelial migration (PubMed:22970700). Also serves as a quality-control checkpoint for entry into bone marrow by providing a 'don't-eat-me' stamping in the context of major histocompatibility complex (MHC) class-I presentation (PubMed:35210567).

Storage

Shipped at conditions Blue Ice

Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

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.

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.

Supplementary info

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

Activity summary	VCAM1 also known as vascular cell adhesion molecule 1 plays an important role in mediating adhesion and signal transduction. VCAM1 has an approximate molecular mass of 110 kDa. It is expressed on the surface of endothelial cells and can be upregulated by cytokines released during inflammation. The protein serves as a ligand for the integrin VLA-4 also known as ¦Б4¦В1 and contributes to the adhesion of leukocytes to endothelial cells.
Biological function summary	Adhesion molecules like VCAM1 participate in immune response by recruiting leukocytes to sites of inflammation. VCAM1 helps guide immune cells to directed locations where they perform defense activities. Although VCAM1 is not part of any known large protein complex its interaction with integrins facilitates the migration of immune cells across the endothelium and into tissue.
Pathways	VCAM1 contributes significantly to the leukocyte extravasation process in inflammatory pathways. It plays a role in both the cytokine-cytokine receptor interaction pathway and the NF-kB signaling pathway which are essential for immune response and cell signaling. Through these pathways it interacts with proteins like ICAM1 and various chemokines helping to coordinate the immune cell movement through vascular tissue barriers.
Associated diseases and disorders	Abnormal regulation of VCAM1 links to various cardiovascular diseases such as atherosclerosis and inflammatory diseases like rheumatoid arthritis. The protein levels may increase in these conditions promoting excessive immune cell recruitment and tissue damage. VCAM1 also interfaces with other proteins like

ICAM1 in these pathological states which together contribute to the progression and severity of these 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

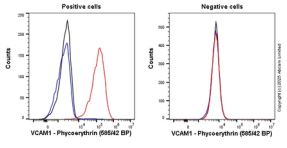
We do not recommend this combination. It is not covered by our product promise.

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.

2 product images



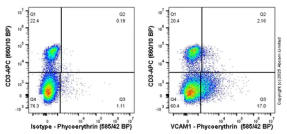
Flow Cytometry - PE Anti-VCAM1 antibody [EPR27027-79] (ab323936)

VCAM1 Flow Cytometry staining using rabbit Anti-VCAM1 antibody

Flow cytometry overlay histogram showing left Hut-78 positive cells and right negative SK-OV-3 stained with ab323936 (red line). The cells were incubated in 1x PBS containing 10% normal goat serum to block non-specific protein-protein interactionfollowed by the antibody (ab323936) (1x 10^6 in 100µl at 0.2 µg/ml (1/2500)) for 30min on ice.

Isotype control antibody (black line) was Rabbit IgG (monoclonal) Phycoerythrin Isotype Control (ab209478) used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.

Acquisition of >5000 events were collected using a 50 mW Yellow/Green laser (561nm) and 585/42 bandpass filter.



Flow Cytometry - PE Anti-VCAM1 antibody [EPR27027-79] (ab323936)

VCAM1 Flow Cytometry staining of C57 BL/6 mouse splenocytes using rabbit Anti-VCAM1 antibody

Flow cytometry staining of C57 BL/6 mouse splenocytes with ab323936 (right) or Rabbit IgG (monoclonal) Phycoerythrin Isotype Control (ab209478) (left). Cells were incubated for 30 min on ice in 1x PBS containing 10µg/ml anti CD16/CD32 and 10% normal goat serum to block FC receptors and non-specific protein-protein interaction followed by the antibody ab323936 or Rabbit IgG (monoclonal) Phycoerythrin Isotype Control (ab209478) (1x 10^6 in 100 µl at 0.2 µg/ml (1/2500)) for 30min on ice. The cells were simultaneously stained with CD3.

Acquisition of >30000 events were collected using a 50 mW Yellow/Green laser (561nm) and 585/42 bandpass filter. Events were gated on live cells.

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