abcam

ab239243

Biotin Anti-VCAM1 antibody [STA]

Anti-VCAM1 antibody [STA] conjugated to Biotin - suitable for flow cytometry, and reacts with human samples. Clone [STA] is a mouse monoclonal antibody cited in 51 publications.

Key facts

Isotype	IgG1
Host species	Mouse
Conjugation	Biotin
Storage buffer	pH: 7.4 Preservative: 0.0975% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing VCAM1 protein. The exact immunogen used to generate this antibody is proprietary information. Database link P19320
Clone number	STA
Purification technique	Size-exclusion chromatography
Purification notes	The purified antibody is conjugated with Biotin-LC-NHS under optimum conditions.The reagent is free of unconjugated biotin.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	5-6 µg/mL
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 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, Store in the dark

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 α4β1 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

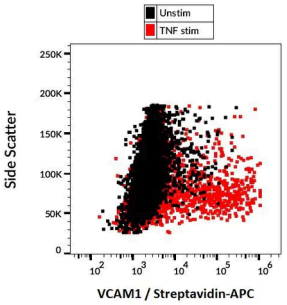
We do not recommend this combination. It is not covered by our product promise.

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1 product image



Flow Cytometry - Biotin Anti-VCAM1 antibody [STA] (ab239243)

VCAM1 Flow Cytometry staining using mouse Anti-VCAM1 antibody

Surface staining of TNF alpha-stimulated HUVEC cells for VCAM1 with ab239243 at 8 µg/ml, GAM-APC.

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