abcam

ab91064

Anti-VE Cadherin antibody [BV13] - Intercellular Junction Marker

Lab Essentials | Recombinant

Key facts

Isotype	IgG1
Host species	Rat
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	BV13
Purification technique	Affinity purification Protein A
Concentration	0.965 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Not recommended

Species	Mouse
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Mouse
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

IP

Tested

Species	Mouse
Dilution info	1/50
Notes	-

Flow Cyt

Tested

Species	Mouse
Dilution info	1/100
Notes	Use 1µg for 10^6 cells in 100 µl total staining volume. ab18407 - Rat monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Target data

See full target information Cdh5

Function	Cadherins are calcium-dependent cell adhesion proteins (By similarity). They preferentially interact with themselves in a homophilic manner in connecting cells; cadherins may thus contribute to the sorting of heterogeneous cell types (By similarity). This cadherin may play an important role in endothelial cell biology through control of the cohesion and organization of the intercellular junctions (PubMed:20332120, PubMed:9220534). It associates with alpha-catenin forming a link to the cytoskeleton (By similarity). Plays a role in coupling actin fibers to cell junctions in endothelial cells, via acting as a cell junctional complex anchor for AMOTL2 and MAGI1 (PubMed:24806444). Acts in concert with KRIT1 and PALS1 to establish and maintain correct endothelial cell polarity and vascular lumen (PubMed:27466317). These effects are mediated by recruitment and activation of the Par polarity complex and RAP1B (By similarity). Positively regulates reorientation of actin stress fibers and endothelial cell reorientation in response to cellular mechantransduction (By similarity). Required for activation of PRKCZ and for localization of phosphorylated PRKCZ, PARD3, TIAM1 and RAP1B to the cell junction (By similarity). Associates with CTNND1/p120-catenin to control CADH5 endocytosis (PubMed:33972531).

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

Notes

The production method has been switched from hybridoma to recombinant on 24th Oct 2025.

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	VE Cadherin also known as CD144 or Cadherin-5 is a protein of about 135 kDa involved in cell adhesion. It is a transmembrane protein characterized by its presence at endothelial cell junctions. VE Cadherin belongs to the cadherin superfamily and its expression predominantly occurs in vascular endothelial cells. This protein facilitates the adhesion between adjacent endothelial cells maintaining the integrity of endothelial barriers.
Biological function summary	VE Cadherin performs essential roles in vascular development and permeability. It is a component of adherens junctions and connects with catenins to mediate cell-cell adhesion through calcium-dependent binding. This protein's adhesive function is critical for blood vessel maturation and response to inflammatory stimuli. Altering VE Cadherin expression impacts vascular stability and endothelial cell layering.
Pathways	VE Cadherin interacts with the Wnt and VEGF signaling pathways. It plays a role in the regulation of endothelial cell survival and migration. The interaction with β-catenin is important in the Wnt pathway influencing the transcription of target genes that modulate cell behavior. In the VEGF pathway VE Cadherin's association with protein kinase C highlights its involvement in endothelial permeability and angiogenesis processes.
Associated diseases and disorders	VE Cadherin dysregulation links to cancer progression and atherosclerosis. Its role in maintaining endothelial barrier integrity implicates it in tumor metastasis where disrupted cell adhesion facilitates cancer cell dissemination. Additionally altered VE Cadherin expression or function associates with atherosclerotic disease where damaged vascular endothelium leads to plaque formation. The connection of VE Cadherin with β-catenin in these conditions highlights its significance in pathological angiogenesis and vascular remodeling.

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

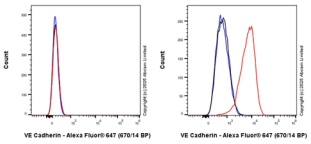
We do not recommend this combination. It is not covered by our product promise.

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.

4 product images

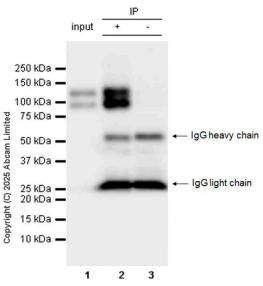


Flow Cytometry - Anti-VE Cadherin antibody [BV13] - Intercellular Junction Marker (ab91064)

VE Cadherin Flow Cytometry staining using rat Anti-VE Cadherin antibody

Flow cytometric analysis of NIH/3T3 (mouse embryonic fibroblast, Left) / bEnd.3 (mouse brain endothelial cell, Right) cells labelling VE Cadherin with ab91064 at 1/100 dilution (1ug) followed by Goat F(ab)2 Anti-Rat IgG Fc (Alexa Fluor® 647, ab150163) secondary at 1/5000 dilution (Red) compared with aRat monoclonal IgG / Black isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) / Blue.

Gated on viable cells.
Negative control: NIH/3T3.



Immunoprecipitation - Anti-VE Cadherin antibody [BV13] - Intercellular Junction Marker (ab91064)

VE Cadherin was immunoprecipitated from bEnd.3 whole cell lysate with ab91064 at 1/50 dilution (2µg in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab91064 at 1/1000 dilution.
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

All lanes:
Immunoprecipitation - Anti-VE Cadherin antibody [BV13] - Intercellular Junction Marker (ab91064) at 1/50 dilution

Lane 1:
bEnd.3 whole cell lysate at 10 µg

Lane 2:
bEnd.3 whole cell lysate

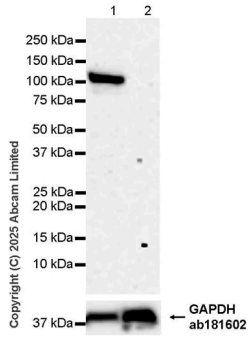
Lane 3:
Rat IgG1- Isotype Control instead of ab91064 in bEnd.3 whole cell lysate

Secondary

All lanes:
Immunoprecipitation - Goat Anti-Rat IgG H&L (HRP) (ab205720) at 1/1000 dilution

Predicted band size: 90 kDa, 120 kDa

Exposure time: 3s



Western blot - Anti-VE Cadherin antibody [BV13] - Intercellular Junction Marker (ab91064)

VE Cadherin Western blot staining using rat Anti-VE Cadherin antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
ab181602 was used as GAPDH loading control at a 1/200000 dilution

Low expression: Mouse brain (PMID: 8555485).

All lanes:
Western blot - Anti-VE Cadherin antibody [BV13] - Intercellular Junction Marker (ab91064) at 1/1000 dilution

Lane 1:
Mouse lung tissue lysate at 40 µg

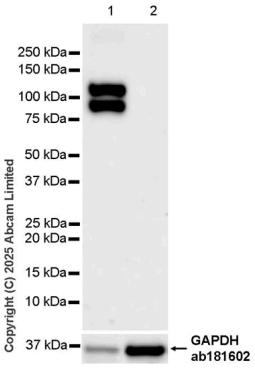
Lane 2:
Mouse brain tissue lysate at 40 µg

Secondary

All lanes:
Western blot - Goat Anti-Rat IgG H&L (HRP) (ab205720) at 1/10000 dilution

Predicted band size: 120 kDa

Exposure time: 180s



Western blot - Anti-VE Cadherin antibody [BV13] - Intercellular Junction Marker (ab91064)

VE Cadherin Western blot staining using rat Anti-VE Cadherin antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
ab181602 was used as GAPDH loading control at a 1/200000 dilution

Negative control: NIH/3T3 (PMID: 8555485).
The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 36631513).

All lanes:
Western blot - Anti-VE Cadherin antibody [BV13] - Intercellular Junction Marker (ab91064) at 1/1000 dilution

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

Lane 2:
NIH/3T3 (mouse embryonic fibroblast) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rat IgG H&L (HRP) (ab205720) at 1/10000 dilution

Predicted band size: 90 kDa, 120 kDa

Exposure time: 81s

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