abcam

**ab272346**

# Alexa Fluor® 647 Anti-VE Cadherin antibody [55-7H1]

Anti-VE Cadherin antibody [55-7H1] conjugated to Alexa Fluor® 647 - suitable for flow cytometry, and reacts with human samples. Clone [55-7H1] is a mouse monoclonal antibody cited in 60 publications.

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## Key facts

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|---|---|
| **Isotype** | IgG1 |
| **Host species** | Mouse |
| **Conjugation** | Alexa Fluor® 647 |
| **Excitation/Emission** | Ex: 650nm, Em: 665nm |
| **Storage buffer** | pH: 7.4 Preservative: 0.0975% Sodium azide Constituents: PBS |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | Cell preparation containing CDH5 protein. The exact immunogen used to generate this antibody is proprietary information. Database link P33151 |
| **Clone number** | 55-7H1 |
| **Purification technique** | Size-exclusion chromatography |
| **Light chain type** | kappa |
| **Purification notes** | Purified from TCS. |

## Reactivity data

## Flow Cyt

### Tested

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| **Species** | Human |
| **Dilution info** | - |
| **Notes** | The reagent is designed for analysis of human blood cells using 4 µl reagent / 100 µl of whole blood or $10^6$ cells in a suspension. |

## Target data

See full target information CDH5

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| **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 (PubMed:21269602). This cadherin may play a important role in endothelial cell biology through control of the cohesion and organization of the intercellular junctions (By similarity). It associates with alpha-catenin forming a link to the cytoskeleton (PubMed:10861224). 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 (By similarity). Acts in concert with KRIT1 and PALS1 to establish and maintain correct endothelial cell polarity and vascular lumen (By similarity). These effects are mediated by recruitment and activation of the Par polarity complex and RAP1B (PubMed:20332120). Positively regulates reorientation of actin stress fibers and endothelial cell reorientation in response to cellular mechantransduction (PubMed:25795300). Required for activation of PRKCZ and for the localization of phosphorylated PRKCZ, PARD3, TIAM1 and RAP1B to the cell junction (PubMed:20332120). Associates with CTNND1/p120-catenin to control CADH5 endocytosis (By similarity). |

## Storage

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| **Shipped at conditions** | Blue Ice |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | +4°C |
| **Storage information** | Store in the dark |

## Notes

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## Supplementary info

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

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| **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.

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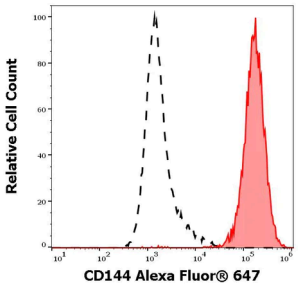
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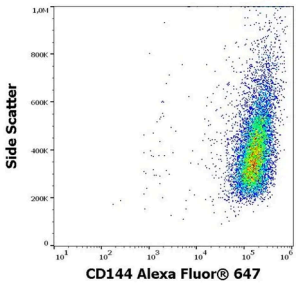
## 2 product images




### Flow Cytometry - Alexa Fluor® 647 Anti-VE Cadherin antibody [55-7H1] (ab272346)

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

Separation of HUVEC (Human umbilical vein endothelial cell line) cells (red-filled) from HL-60 (Human promyelocytic leukemia cell line) cells (black-dashed) in flow cytometry analysis (surface staining) stained using ab272346 at 4 µl reagent per milion cells in 100 µl of cell suspension). VE Cadherin also known as CD144.




### Flow Cytometry - Alexa Fluor® 647 Anti-VE Cadherin antibody [55-7H1] (ab272346)

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

Flow cytometry surface staining pattern of HUVEC (Human umbilical vein endothelial cell line) cells stained using ab272346 at 4 µl reagent per milion cells in 100 µl of cell suspension. VE Cadherin also known as CD144.

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