

Alexa Fluor® 647 anti-human CD144 (VE-Cadherin)

Catalog # / Size: 2342570 / 100 tests
2342565 / 25 tests

Clone: BV9

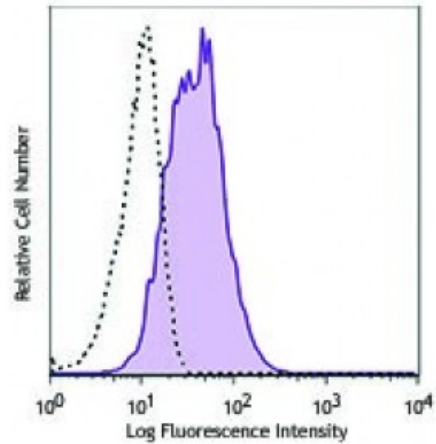
Isotype: Mouse IgG2a, κ

Reactivity: Human

Preparation: The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 647 under optimal conditions.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA).

Concentration: Lot-specific



Human umbilical vein endothelial cells (HUVEC) were stained with CD144 (clone BV9) Alexa Fluor® 647 (filled histogram) or mouse IgG2a, κ Alexa Fluor® 647 isotype control (open histogram).

Applications:

Applications: Flow Cytometry

Recommended Usage: Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is 5 microL per million cells or 5 microL per 100 microL of whole blood. For immunohistochemical staining on formalin-fixed paraffin-embedded tissue sections, a concentration range of 5 - 10 microg/ml is suggested. It is recommended that the reagent be titrated for optimal performance for each application.

* Alexa Fluor® 647 has a maximum emission of 668 nm when it is excited at 633 nm / 635 nm.

Application Notes: Clone BV9 has been shown to block VE-cadherin, causing a redistribution of VE-cadherin away from intracellular junctions.⁶ This clone binds to EC3-EC4 region in the extracellular domain of human VE-cadherin.⁷ Additional reported applications (for the relevant formats) include: Western Blotting^{1,2}, immunofluorescence microscopy^{1,3}, immunoprecipitation^{1,4}, blocking angiogenesis *in vitro*^{4,5}, inhibiting VE-cadherin reorganization⁴, and inducing endothelial cell apoptosis⁴. The LEAF™ purified antibody (Endotoxin <0.1 EU/μg, Azide-Free, 0.2 μm filtered) is recommended for functional assays (contact our [custom solutions team](#)).

- Application References:**
1. Almagro S, *et al.* 2010. *Mol. Cell Biol.* 30:1703. (WB, IF, IP)
 2. Zhang F, *et al.* 2004. *J. Biol. Chem.* 279:11760. (WB)
 3. Iurlaro M, *et al.* 2004. *Am. J. Pathol.* 165:181. (IF)
 4. Corada M, *et al.* 2001. *Blood* 97:1679. (IP, Block)
 5. Kooistra M, *et al.* 2005. *FEBS* 579:4966. (Block)
 6. Corada M, *et al.* 2001. *Blood* 97:1679. (Block)
 7. Bouillet L, *et al.* 2013. *Laboratory Investigation* 93:1194-11202.

Description: CD144, also known as VE-cadherin and cadherin-5, is a 140 kD glycoprotein which

is composed of five extracellular cadherin repeats and a highly conserved cytoplasmic tail region. It is a calcium-dependent transmembrane cell-cell adhesion molecule localized at the intercellular boundaries of endothelial cells, hematopoietic stem cells, and perineurial cells. It functions as a classic cadherin by mediating homophilic adhesion and functions as a plasma membrane attachment site for the cytoskeleton. CD144 is thought to play a role in vascular development, permeability, and remodeling.

**Antigen
References:**

1. Taddei A, *et al.* 2008. *Nat. Cell Biol.* 10:923.
2. Gavard J, *et al.* 2006. *Nat. Cell Biol.* 8:1223.
3. Kim I, *et al.* 2005. *Blood* 106:903.
4. Suzuki S, *et al.* 1991. *Cel*