SONY

Product Data Sheet

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

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

Clone: BV9

Isotype: Mouse IgG2a, κ

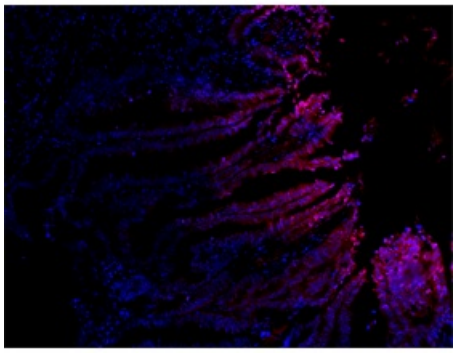
Reactivity: Human

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 BSA (origin USA).

Workshop Number: IV 103

Concentration: Lot-specific



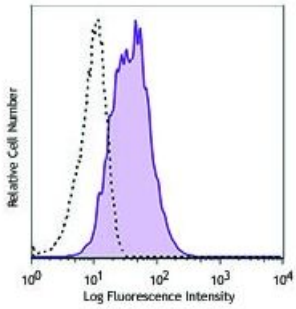
Human paraffin-embedded colorectal cancer tissue slices were prepared with a standard protocol of deparaffinization and rehydration. Antigen retrieval was done with Tris-Buffered Saline 1X (1.0 M, pH 7.4) (BioLegend, Cat number 925601) at 95°C for 40 minutes. Tissue was washed with PBS/ 0.05% Tween20 twice for 5 minutes and blocked with 5% FBS and 0.2% Gelatin for 30 minutes. Then, the tissue was stained with 10 µg/ml of anti-human CD144 (BV9) Alexa Fluor® 647 (red) at 4°C overnight. Nuclei were counterstained with DAPI (blue). The image was captured with a 10X objective.

Applications:

Applications: Flow Cytometry, Immunohistochemistry

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 µl per million cells or 5 µl per 100 µl of whole blood. For immunohistochemical staining on formalin-fixed paraffin-embedded tissue sections, a concentration range of 5 - 10 µg/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.



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).

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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 reorganization[4], and inducing endothelial cell apoptosis[4].

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. *Cell Regul.* 2:261.

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