Technical Data Sheet

BV480 Mouse Anti-Human CD324 (E-Cadherin)

Product Information

Material Number: 565646
Alternate Name: E-cadherin; CD324; CDH1; Cadherin-1; ECAD; CDHE; Arc-1; LCAM; UVO
Size: 50 µg
Concentration: 0.2 mg/ml
Clone: 67A4
Immunogen: Human Breast Tumor Cell Line
Isotype: Mouse (BALB/c) IgG1, κ
Reactivity: QC Testing: Human
Workshop: VIII 80167
Storage Buffer: Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The 67A4 monoclonal antibody specifically recognizes the extracellular domain of human E-Cadherin (CD324). E-Cadherin is a 120-kDa transmembrane glycoprotein that is localized in the adherens junctions of epithelial cells. There it interacts with the cytoskeleton through the associated cytoplasmic catenin proteins. In addition to being a calcium-dependent adhesion molecule, E-Cadherin is also a critical regulator of epithelial junction formation. Its association with catenins is necessary for cell-to-cell adhesion. These E-Cadherin/catenin complexes associate with cortical actin bundles at both the zonula adherens and the lateral adhesion plaques. Tyrosine phosphorylation can disrupt these complexes, leading to changes in cell adhesion properties. E-Cadherin expression is often down-regulated in highly invasive, poorly differentiated carcinomas. Increased expression of E-Cadherin in these cells reduces their invasiveness. Thus, loss of expression or function of E-Cadherin appears to be an important step in tumorigenic progression. Pluripotent stem cells express E-Cadherin. Upon differentiation, an epithelial to mesenchymal transition results in the loss of E-cadherin expression and a gain in the expression of N-cadherin.

The antibody was conjugated to BD Horizon BV480 which is part of the BD Horizon Brilliant™ Violet family of dyes. With an Ex Max of 436-nm and Em Max at 478-nm, BD Horizon BV480 can be excited by the violet laser and detected in the BD Horizon BV510 (525/40-nm) filter set. BV480 has less spillover into the BV605 detector and, in general, is brighter than BV510.

Two-color image analysis of CD324 expression by cells in the human large intestine. Cryosections (5 µm) of human large intestine were fixed with BD Cytofix™ Fixation Buffer (Cat. No. 554655), blocked with 5% goat serum and 1% BSA diluted in 1× PBS, and stained with BD Horizon™ BV480 Mouse Anti-CD324 (E-Cadherin) antibody (Cat. No. 565646; pseudo-colored green). DRAQ5 was used as a nuclear counterstain (Cat. No. 564903; pseudo-colored red). Slides were mounted with ProLong® Gold and the images were captured on a standard epifluorescence microscope. Original magnification, 20×.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
The antibody was conjugated with BD Horizon BV480 under optimum conditions, and unconjugated antibody and free BD Horizon BV480 were removed.

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565646 Rev. 2
Recommended Assay Procedure:
For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes are used in the same experiment. Fluorescent dye interactions may cause staining artifacts which may affect data interpretation. The BD Horizon Brilliant Stain Buffer was designed to minimize these interactions. More information can be found in the Technical Data Sheet of the BD Horizon Brilliant Stain Buffer (Cat. No. 563794/566349).

For Immunofluorescence Applications:
The use of a mounting reagent (eg, ProLong® Gold) is highly recommended to maximize the photostability of BV480. For confocal microscopy systems, a 440 nm laser is the optimal excitation source and the recommended emission filter is a 485/20 nm bandpass filter.

For epifluorescence microscopes with broad spectrum excitation sources, the recommended excitation and emission filters are 445/20 nm and 485/20 nm bandpass filters, respectively. For specific multicolor imaging applications, the exact filter configurations should be optimized by the end user. For additional instrument/filter configuration information, please visit http://www.bdbiosciences.com/research/cellularimaging.

Suggested Companion Products

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<td>DRAQ5™</td>
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<tr>
<td>565652</td>
<td>BV480 Mouse IgG1, k Isotype Control</td>
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<td>X40</td>
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Product Notices
1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
5. This antibody has been developed for the immunofluorescence imaging application. However, the antibody is routinely QC tested by flow cytometric analysis. Researchers are encouraged to titrate the reagent for optimal performance.
6. ProLong® is a registered trademark of Thermo Fisher Scientific, Inc. Waltham, MA.
7. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
8. BD Horizon Brilliant Violet 480 is covered by one or more of the following US patents: 8,575,303; 8,354,239.
9. BD Horizon Brilliant Stain Buffer is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,575,303; 8,354,239.

References