Technical Data Sheet

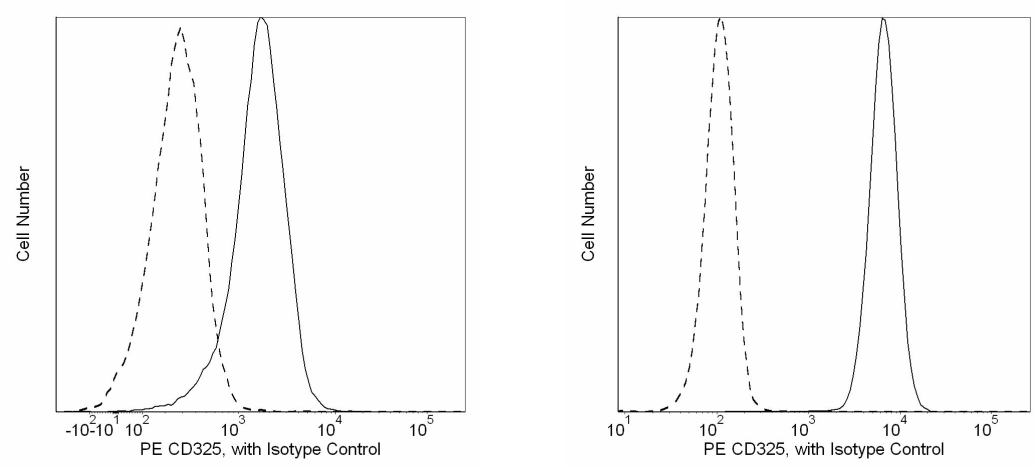
PE Mouse anti-Human CD325

Product Information

Material Number:	**561554**
Alternate Name:	Cadherin-2, N-Cadherin
Entrez Gene ID:	1000
Size:	100 tests
Vol. per Test:	5 µl
Clone:	8C11
Immunogen:	Human extracellular N-Cadherin domain Recombinant Protein
Isotype:	Mouse IgG1, κ
Reactivity:	QC tested: Human
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The 8C11 monoclonal antibody recognizes the extracellular domain of human N-Cadherin (CD325). Cadherins are a family of Ca2+ -dependent intercellular adhesion molecules that play a central role in controlling morphogenetic movements during development. Their function is regulated by association with the actin cytoskeleton by a complex of cytoplasmic proteins called the catenins (α, β, γ). Members of the cadherin family include P-cadherin , E-cadherin (uvomorulin), N-cadherin (neural cadherin), R-cadherin, cadherin 5, L-CAM, and EP-cadherin. N-cadherin mRNA is found at elevated levels in brain and heart and at a much lower level in liver. Mechanisms such as mRNA expression, cytokine modulation, and protease-mediated turnover modulate N-cadherin protein levels during development. In addition, N-cadherin function is indirectly regulated by endogenous kinases and phosphatases. Tyrosine phosphorylation of β-catenin complexed with N-cadherin results in dissociation of N-cadherin from actin. However, N-cadherin also interacts with a PTP1B-like phosphatase that dephosphorylates β-catenin and promotes N-cadherin/actin association. Thus, N-cadherin is an integral adhesion molecule whose function is regulated by protein-protein interactions and phosphorylation/dephosphorylation events.



Flow cytometric analysis of N-Cadherin on H9-derived neural stem cells (NSC, left) and transformed human epithelioid carcinoma (HeLa, right). *NSC derived from H9 human ES cells (WiCell, Madison, WI) and HeLa cells (ATCC CCL 2.2) were harvested without trypsinization [please note, the epitope is sensitive to trypsin] and stained with either PE Mouse IgG1, κ isotype control (dashed line, Cat. No. 554680) or PE Mouse Mouse Anti-Human CD325 antibody (solid line) at matching concentrations. The histograms were derived from gated events based on light scattering characteristics of the NSC or HeLa cells. Flow cytometry was performed on a BD LSR™ II flow cytometry system.*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

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

Application Notes

Application

Flow cytometry	Routinely Tested

BD Biosciences

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877.232.8995	888.259.0187	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

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Recommended Assay Procedure:

Because the extracellular domain of N-Cadherin is trypsin-sensitive, it is important to avoid using trypsin to dissociate the cells to be studied.

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
554680	PE Mouse IgG1, κ Isotype Control	0.1 mg	MOPC-21

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10^6 cells in a 100-µl experimental sample (a test).
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
5. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
6. 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.

References

Knudsen KA, Soler AP, Johnson KR, Wheelock MJ. Interaction of alpha-actinin with the cadherin/catenin cell-cell adhesion complex via alpha-catenin. *J Cell Biol.* 1995; 130:66-77. (Biology)

Puch S, Armeanu S, Kibler C, et al. N-cadherin is developmentally regulated and functionally involved in early hematopoietic cell differentiation. *J Cell Sci.* 2001; 114(8):1567-1577. (Clone-specific: Flow cytometry)

Wein F, Pietsch L, Saffrich R, et al. N-Cadherin is expressed on human hematopoietic progenitor cells and mediates interaction with human mesenchymal stromal cells. *Stem Cell Res.* 2010; 4(2):129-139. (Clone-specific: Flow cytometry)