Technical Data Sheet

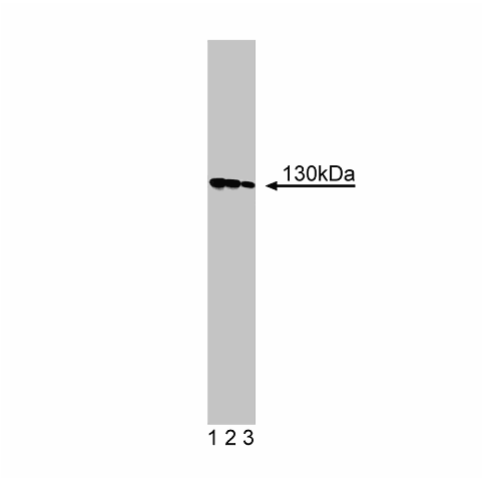
Purified Mouse Anti-Cadherin-5

Product Information

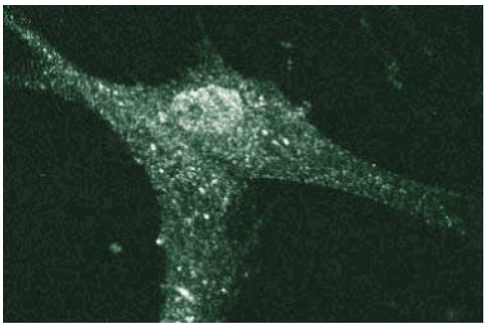
Material Number:	**610251**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	75/Cadherin-5
Immunogen:	Human Cadherin 5 aa. 26-194
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human
Target MW:	130 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Cadherins are a family of transmembrane glycoproteins involved in the Ca2+- dependent cell-cell adhesion that occurs in many tissues. These proteins are similar in their domain structure (45-74% amino acid conservation), Ca2+ and protease-sensitivity, and molecular weight. Cadherin-5 (VE-Cadherin or CD144) is one of a number of cadherins (cadherin-4 through -11) whose cDNAs were isolated from rat brain and retina. These cadherins have a cytoplasmic domain that is highly conserved relative to previously identified cadherins, indicating that this domain is essential for cell adhesion activity. This function is mediated by cadherin interaction with cytoskeletal proteins. However, Cadherin-5's cytoplasmic domain has the lowest degree of homology with the other cadherins. Cadherin-5 is expressed in brain and various other tissues, including umbilical cord vein endothelial cells. A new type of adhering junction has been identified in certain vascular endothelial cells. These junctions are known as "complexus adherens" and are morphologically and compositionally distinct from desmosomes and zonula adherens junctions. The complexus adherens of endothelial cells lack desmosomal cadherins as well as E-Cadherin. However, these cells are rich in Cadherin-5 which colocalizes with desmoplakin and γ-Catenin (plakoglobin).



Western blot analysis of Cadherin-5 on human endothelial cell lysate. *Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of anti-Cadherin-5 antibody.*



Immunofluorescent staining of Human Fibroblasts with anti-Cadherin-5 antibody.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20°C.

BD Biosciences

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development
Immunoprecipitation	Not Recommended
Immunohistochemistry	Not Recommended

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml.

Suggested Companion Products

Catalog Number	Name	Size	Clone
611450	Human Endothelial Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. 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.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Corada M, Liao F, Lindgren M. Monoclonal antibodies directed to different regions of vascular endothelial cadherin extracellular domain affect adhesion and clustering of the protein and modulate endothelial permeability. *Blood.* 2001; 97(6):1679-1684.(Clone-specific: Immunofluorescence, Western blot)

Corada M, Zanetta L, Orsenigo F. A monoclonal antibody to vascular endothelial-cadherin inhibits tumor angiogenesis without side effects on endothelial permeability. *Blood.* 2002; 100(3):905-911.(Clone-specific: Flow cytometry, Western blot)

Rahimi N, Kazlauskas A. A role for cadherin-5 in regulation of vascular endothelial growth factor receptor 2 activity in endothelial cells. *Mol Biol Cell.* 1999; 10:3401-3407.(Clone-specific: Functional assay)

Schmelz M, Franke WW. Complexus adhaerentes, a new group of desmoplakin-containing junctions in endothelial cells: the syndesmos connecting retothelial cells of lymph nodes. *J Cell Biol.* 1993; 61(2):274-289.(Biology)

Suzuki S, Sano K, Tanihara H. Diversity of the cadherin family: evidence for eight new cadherins in nervous tissue. *Cell Regul.* 1991; 2(4):261-270.(Biology)