Technical Data Sheet

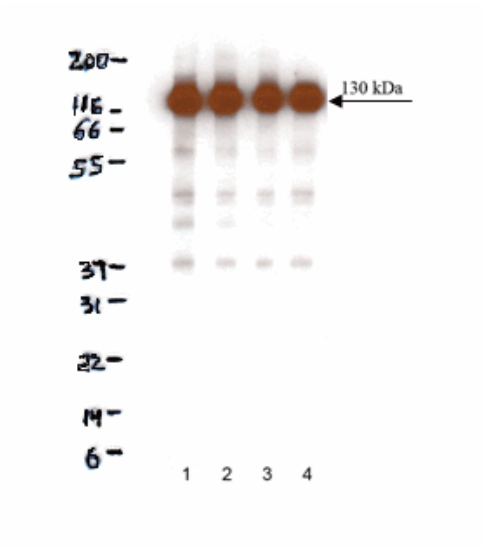
Purified Mouse Anti-N-Cadherin

Product Information

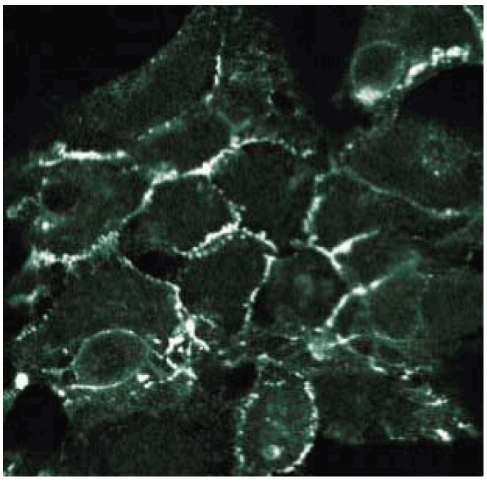
Material Number:	**610920**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	32/N-Cadherin
Immunogen:	Mouse N-Cadherin aa. 802-819
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human Tested in Development: Rat, Mouse, Chicken
Target MW:	130 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

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.



Western blot analysis of N-Cadherin on HeLa lysate. *Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000, lane 4: 1:2000 dilution of anti-N-Cadherin.*



Immunofluorescent staining of 293 cells with anti-N-cadherin antibody.

Preparation and Storage

Store undiluted at -20°C.

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

Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development
Immunoprecipitation	Reported

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal
611449	HeLa Cell Lysate	500 µg	(none)

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. 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.

References

Cowin P. Unraveling the cytoplasmic interactions of the cadherin superfamily. *Proc Natl Acad Sci U S A.* 1994; 91(23):10759-10761. (Biology)

Izawa I, Nishizawa M, Ohtakara K, Inagaki M. Densin-180 interacts with delta-catenin/neural plakophilin-related armadillo repeat protein at synapses. *J Biol Chem.* 2002; 277(7):5345-5350. (Clone-specific: Immunofluorescence, Immunoprecipitation, Western blot)

Miyatani S, Shimamura K, Hatta M. Neural cadherin: role in selective cell-cell adhesion. *Science.* 1989; 245(4918):631-635. (Biology)

Nurnberger J, Bacallao RL, Phillips CL. Inversin forms a complex with catenins and N-cadherin in polarized epithelial cells. *Mol Biol Cell.* 2002; 13(9):3096-3106. (Clone-specific: Immunofluorescence, Immunoprecipitation, Western blot)