SANTA CRUZ BIOTECHNOLOGY, INC.

N-cadherin (D-4): sc-8424

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cadherins comprise a family of Ca^{2+}-dependent adhesion molecules that function to mediate cell-cell binding critical to the maintenance of tissue structure and morphogenesis. The classical cadherins, E-, N- and P-cadherin, consist of large extracellular domains characterized by a series of five homologous NH_2 terminal repeats. The most distal of these cadherins is thought to be responsible for binding specificity, transmembrane domains and carboxy-terminal intracellular domains. The relatively short intracellular domains interact with a variety of cytoplasmic proteins, such as β-catenin, to regulate cadherin function. Members of this family of adhesion proteins include rat K-cadherin (and its human homolog, cadherin-6), R-cadherin, B-cadherin, E/P-cadherin and cadherin-5.

CHROMOSOMAL LOCATION

Genetic locus: CDH2 (human) mapping to 18q12.1; Cdh2 (mouse) mapping to 18 A1.

SOURCE

N-cadherin (D-4) is a mouse monoclonal antibody raised against amino acids 450-512 within the extracellular domain of N-cadherin of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

N-cadherin (D-4) is available conjugated to agarose (sc-8424 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-8424 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-8424 PE), fluorescein (sc-8424 FITC), Alexa Fluor® 488 (sc-8424 AF488), Alexa Fluor® 546 (sc-8424 AF546), Alexa Fluor® 594 (sc-8424 AF594) or Alexa Fluor® 647 (sc-8424 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-8424 AF680) or Alexa Fluor® 790 (sc-8424 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

N-cadherin (D-4) is recommended for detection of N-cadherin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). N-cadherin (D-4) is also recommended for detection of N-cadherin in additional species, including equine and canine.

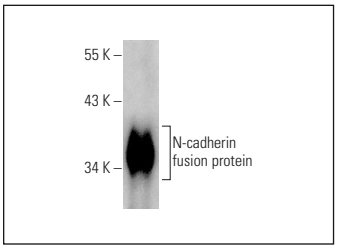
Suitable for use as control antibody for N-cadherin siRNA (h): sc-29403, N-cadherin siRNA (m): sc-35999, N-cadherin siRNA (r): sc-270280, N-cadherin shRNA Plasmid (h): sc-29403-SH, N-cadherin shRNA Plasmid (m): sc-35999-SH, N-cadherin shRNA Plasmid (r): sc-270280-SH, N-cadherin shRNA (h) Lentiviral Particles: sc-29403-V, N-cadherin shRNA (m) Lentiviral Particles: sc-35999-V and N-cadherin shRNA (r) Lentiviral Particles: sc-270280-V.

Molecular Weight of N-cadherin: 130 kDa.

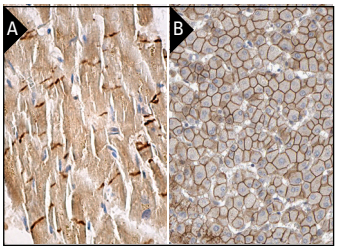
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



N-cadherin (D-4): sc-8424. Western blot analysis of human recombinant N-cadherin fusion protein.



N-cadherin (D-4): sc-8424. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing Z discs and cytoplasmic staining of myocytes (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing membrane staining of heptocytes cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Hatoko, M., et al. 2001. The differential expression of N-cadherin in vascularized and nonvascularized nerve grafts: a study in a rat sciatic nerve model. Ann. Plast. Surg. 47: 322-327.
2. Wang, M., et al. 2014. N-cadherin is a novel ERα anchor that protects against 6-OHDA damage to dopaminergic cells. Cell. Mol. Neurobiol. 34: 123-131.
3. Malchenko, S., et al. 2015. A mouse model of human primitive neuroectodermal tumors resulting from microenvironmentally-driven malignant transformation of orthotopically transplanted radial glial cells. PLoS ONE 10: e0121707.
4. Yao, J., et al. 2016. miR-27b is upregulated in cervical carcinogenesis and promotes cell growth and invasion by regulating CDH11 and epithelial-mesenchymal transition. Oncol. Rep. 35: 1645-1651.
5. Xiang, Y., et al. 2017. Fusion of regionally specified hPSC-derived organoids models human brain development and interneuron migration. Cell Stem Cell 21: 383-398.
6. Guo, D., et al. 2018. Enhanced motility and proliferation by miR-10b/FUT8/p-Akt axis in breast cancer cells. Oncol. Lett. 16: 2097-2104.
7. Wang, F., et al. 2019. miR-544 inhibits the migration and invasion of anaplastic thyroid cancer by targeting Yin Yang-1. Oncol. Lett. 17: 2983-2992.
8. Li, S., et al. 2020. Effect of DEC1 on the proliferation, adhesion, invasion and epithelial-mesenchymal transition of osteosarcoma cells. Exp. Ther. Med. 19: 2360-2366.

RESEARCH USE

For research use only, not for use in diagnostic procedures.