SANTA CRUZ BIOTECHNOLOGY, INC.

N-cadherin (13A9): sc-59987

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 cadherin K (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 (13A9) is a mouse monoclonal antibody raised against recombinant N-cadherin cytoplasmic domain fusion protein 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 (13A9) is available conjugated to agarose (sc-59987 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-59987 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-59987 PE), fluorescein (sc-59987 FITC), Alexa Fluor® 488 (sc-59987 AF488), Alexa Fluor® 546 (sc-59987 AF546), Alexa Fluor® 594 (sc-59987 AF594) or Alexa Fluor® 647 (sc-59987 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-59987 AF680) or Alexa Fluor® 790 (sc-59987 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

N-cadherin (13A9) 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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.

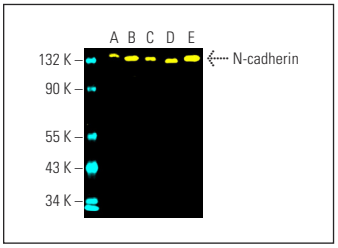
Molecular Weight of N-cadherin: 130 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, mouse cerebellum extract: sc-2403 or rat cerebellum extract: sc-2398.

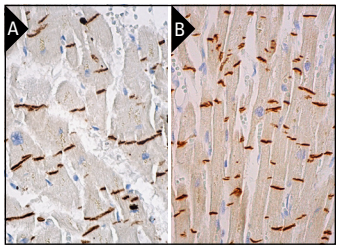
STORAGE

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

DATA



N-cadherin (13A9) Alexa Fluor® 488: sc-59987 AF488. Direct fluorescent western blot analysis of N-cadherin expression in SH-SY5Y (**A**) and Hep G2 (**B**) whole cell lysates and mouse cerebellum (**C**), rat cerebellum (**D**) and human heart (**E**) tissue extracts. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker MW Tag-Alexa Fluor® 647: sc-516791.



N-cadherin (13A9): sc-59987. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing Z discs (**A**) and intercalated disc (**B**) staining of myocytes.

SELECT PRODUCT CITATIONS

1. Martinez-Orozco, R., et al. 2010. Arachidonic acid promotes epithelial-to-mesenchymal-like transition in mammary epithelial cells MCF10A. Eur. J. Cell Biol. 89: 476-488.
2. Chen, M.C., et al. 2012. Resveratrol inhibits LPS-induced epithelial-mesenchymal transition in mouse melanoma model. Innate Immun. 18: 685-693.
3. Wang, Y., et al. 2013. Loss of P53 facilitates invasion and metastasis of prostate cancer cells. Mol. Cell. Biochem. 384: 121-127.
4. Wu, J., et al. 2014. ΔNp63α activates CD82 metastasis suppressor to inhibit cancer cell invasion. Cell Death Dis. 5: e1280.
5. Ou-Yang, L., et al. 2015. Forkhead box C1 induces epithelial-mesenchymal transition and is a potential therapeutic target in nasopharyngeal carcinoma. Mol. Med. Rep. 12: 8003-8009.
6. Somasundaram, V., et al. 2016. Selective mode of action of plumbagin through BRCA1 deficient breast cancer stem cells. BMC Cancer 16: 336.
7. Bustos, V., et al. 2017. GPER mediates differential effects of estrogen on colon cancer cell proliferation and migration under normoxic and hypoxic conditions. Oncotarget 8: 84258-84275.
8. Hoorntje, E.T., et al. 2018. No major role for rare plectin variants in arrhythmogenic right ventricular cardiomyopathy. PLoS ONE 13: e0203078.
9. Lei, Y., et al. 2019. TIS111D can affect bladder cancer cells by regulating epithelial-mesenchymal transition. Life Sci. 235: 116832.
10. Momeny, M., et al. 2020. Anti-tumor activity of cediranib, a pan-vascular endothelial growth factor receptor inhibitor, in pancreatic ductal adenocarcinoma cells. Cell. Oncol. 43: 81-93.

RESEARCH USE

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