

# N-cadherin (13A9): sc-59987

## 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  $\beta$ -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  $\mu$ g IgG<sub>1</sub> 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  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-59987 HRP), 200  $\mu$ g/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  $\mu$ g/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  $\mu$ g/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  $\mu$ g per 100-500  $\mu$ g 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.

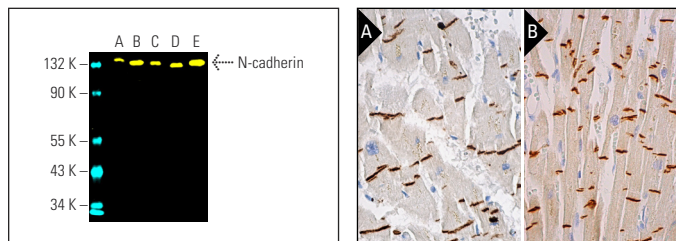
Molecular Weight of N-cadherin: 130 kDa.

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

- 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.
- Chen, M.C., et al. 2012. Resveratrol inhibits LPS-induced epithelial-mesenchymal transition in mouse melanoma model. *Innate Immun.* 18: 685-693.
- Wang, Y., et al. 2013. Loss of P53 facilitates invasion and metastasis of prostate cancer cells. *Mol. Cell. Biochem.* 384: 121-127.
- Wu, J., et al. 2014.  $\Delta Np63\alpha$  activates CD82 metastasis suppressor to inhibit cancer cell invasion. *Cell Death Dis.* 5: e1280.
- 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.
- Somasundaram, V., et al. 2016. Selective mode of action of plumbagin through BRCA1 deficient breast cancer stem cells. *BMC Cancer* 16: 336.
- 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.
- Hoorntje, E.T., et al. 2018. No major role for rare plectin variants in arrhythmogenic right ventricular cardiomyopathy. *PLoS ONE* 13: e0203078.
- Lei, Y., et al. 2019. TIS111D can affect bladder cancer cells by regulating epithelial-mesenchymal transition. *Life Sci.* 235: 116832.
- 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.