SANTA CRUZ BIOTECHNOLOGY, INC.

N/R-cadherin (H-4): sc-271386

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, CDH4 (human) mapping to 20q13.33; Cdh2 (mouse) mapping to 18 A1, Cdh4 (mouse) mapping to 2 H4.

SOURCE

N/R-cadherin (H-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 808-837 within a C-terminal cytoplasmic domain of N-cadherin of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

N/R-cadherin (H-4) is available conjugated to agarose (sc-271386 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271386 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271386 PE), fluorescein (sc-271386 FITC), Alexa Fluor® 488 (sc-271386 AF488), Alexa Fluor® 546 (sc-271386 AF546), Alexa Fluor® 594 (sc-271386 AF594) or Alexa Fluor® 647 (sc-271386 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271386 AF680) or Alexa Fluor® 790 (sc-271386 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271386 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

N/R-cadherin (H-4) is recommended for detection of N-cadherin and R-cadherin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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/R-cadherin (H-4) is also recommended for detection of N-cadherin and R-cadherin in additional species, including equine, canine, bovine and avian.

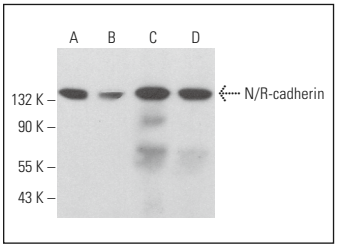
Molecular Weight of N/R-cadherin: 130 kDa.

Positive Controls: human brain extract: sc-364375.

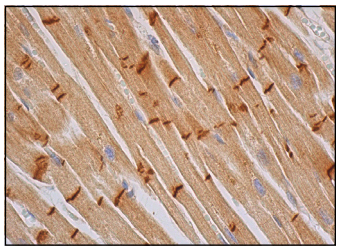
STORAGE

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

DATA



N/R-cadherin (H-4): sc-271386. Western blot analysis of N/R-cadherin expression in human cerebral cortex (**A**), human brain (**B**), mouse cerebellum (**C**) and rat cerebellum (**D**) tissue extracts.



N/R-cadherin (H-4): sc-271386. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing intercalated disc and cytoplasmic staining of myocytes.

SELECT PRODUCT CITATIONS

1. Feng, B., et al. 2012. Colorectal cancer migration and invasion initiated by microRNA-106a. PLoS ONE 7: e43452.
2. Reaves, D.K., et al. 2014. The role of lipolysis stimulated lipoprotein receptor in breast cancer and directing breast cancer cell behavior. PLoS ONE 9: e91747.
3 Rojas, F., et al. 2015. Reactive oxygen species trigger motoneuron death in non-cell-autonomous models of ALS through activation of c-Abl signaling. Front. Cell. Neurosci. 9: 203.
4. Sun, Y., et al. 2016. NFκB signaling plays irreplaceable roles in cisplatin-induced bladder cancer chemoresistance and tumor progression. Int. J. Oncol. 48: 225-234.
5. Xiang, Y., et al. 2017. MiR-93-5p inhibits the EMT of breast cancer cells via targeting MKL-1 and STAT3. Exp. Cell Res. 357: 135-144.
6. Abdel Fattah, A.R., et al. 2018. 3D cellular structures and co-cultures formed through the contactless magnetic manipulation of cells on adherent surfaces. Biomater. Sci. 6: 683-694.
7. Li, J.P., et al. 2019. Long noncoding RNA H19 competitively binds miR-93-5p to regulate Stat3 expression in breast cancer. J. Cell. Biochem. 120: 3137-3148.
8. Kobayashi, E., et al. 2019. Inhibition of UCH-L1 deubiquitinating activity with two forms of LDN-57444 has anti-invasive effects in metastatic carcinoma cells. Int. J. Mol. Sci. 20: 3733.
9. Catalano, S., et al. 2019. Phosphodiesterase 5 (PDE5) is highly expressed in cancer-associated fibroblasts and enhances breast tumor progression. Cancers 11: 1740.

RESEARCH USE

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