SANTA CRUZ BIOTECHNOLOGY, INC.

N-cadherin (H-2): sc-393933

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.

REFERENCES

1. Takeichi, M. 1988. The cadherins: cell-cell adhesion molecules controlling animal morphogenesis. Development 102: 639-655.
2. Hatta, M., et al. 1991. Genomic organization and chromosomal mapping of the mouse P-cadherin gene. Nucleic Acids Res. 19: 4437-4441.
3. Koch, P.J. and Franke, W.W. 1994. Desmosomal cadherins: another growing multigene family of adhesion molecules. Curr. Opin. Cell Biol. 6: 682-687.

CHROMOSOMAL LOCATION

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

SOURCE

N-cadherin (H-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 800-825 within a C-terminal cytoplasmic 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 (H-2) is available conjugated to agarose (sc-393933 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-393933 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393933 PE), fluorescein (sc-393933 FITC), Alexa Fluor® 488 (sc-393933 AF488), Alexa Fluor® 546 (sc-393933 AF546), Alexa Fluor® 594 (sc-393933 AF594) or Alexa Fluor® 647 (sc-393933 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393933 AF680) or Alexa Fluor® 790 (sc-393933 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393933 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

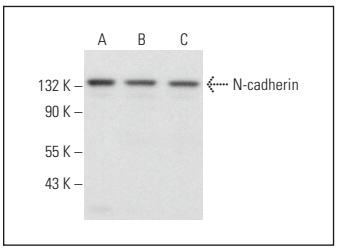
N-cadherin (H-2) is recommended for detection of N-cadherin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution 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).

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.

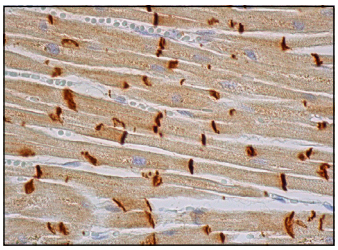
Molecular Weight of N-cadherin: 130 kDa.

Positive Controls: human cerebral cortex extract: sc-516707, rat cerebellum extract: sc-2398 or mouse cerebellum extract: sc-2403.

DATA



N-cadherin (H-2): sc-393933. Western blot analysis of N-cadherin expression in human cerebral cortex (**A**), mouse cerebellum (**B**) and rat cerebellum (**C**) tissue extracts.



N-cadherin (H-2): sc-393933. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing intercalated disc and cytoplasmic staining of myocytes.

SELECT PRODUCT CITATIONS

1. Yue, X., et al. 2016. Leukemia inhibitory factor promotes EMT through Stat3-dependent miR-21 induction. Oncotarget 7: 3777-3790.
2. Song, K.H., et al. 2020. Evaluation of anti-tumor effects of whole-body low-dose irradiation in metastatic mouse models. Cancers 12: 1126.
3. Fan, Y. and Meyer, T. 2021. Molecular control of cell density-mediated exit to quiescence. Cell Rep. 36: 109436.
4. Wei, T., et al. 2022. Two distinct males absent on the first (MOF)-containing histone acetyltransferases are involved in the epithelial-mesenchymal transition in different ways in human cells. Cell. Mol. Life Sci. 79: 238.
5. Sternburg, E.L., et al. 2023. Mammalian pumilio proteins control cellular morphology, migration, and adhesion. Sci. Rep. 13: 3002.

RESEARCH USE

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