SANTA CRUZ BIOTECHNOLOGY, INC.

N/R-cadherin (C-16):

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.

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 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of N-cadherin of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-31031 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

N/R-cadherin (C-16) is recommended for detection of N-cadherin and R-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/R-cadherin (C-16) is also recommended for detection of N-cadherin and R-cadherin in additional species, including equine, canine, bovine, porcine and avian.

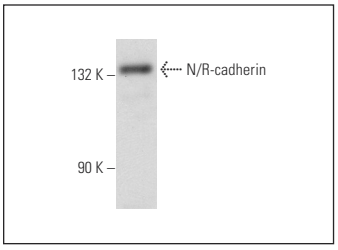
Molecular Weight of N/R-cadherin: 130 kDa.

Positive Controls: PC-12 cell lysate: sc-2250, A-10 cell lysate: sc-3806 or mouse brain extract: sc-2253.

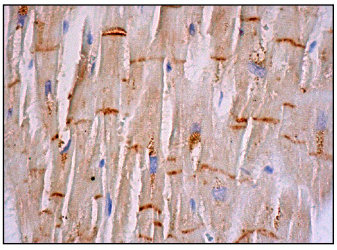
STORAGE

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 (C-16): sc-31031. Western blot analysis of N/R-cadherin expression in mouse brain tissue extract.



N/R-cadherin (C-16): sc-31031. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing staining of intercalating discs.

SELECT PRODUCT CITATIONS

1. Wang, W., et al. 2009. Matrix metalloproteinase-1 promotes muscle cell migration and differentiation. Am. J. Pathol. 174: 541-549.
2. Karlsson, C., et al. 2009. Identification of a stem cell niche in the zone of Ranvier within the knee joint. J. Anat. 215: 355-363.
3. Gyorgy, A.B., et al. 2010. Reverse phase protein microarray technology in traumatic brain injury. J. Neurosci. Methods 192: 96-101.
4. Kamnaksh, A., et al. 2012. Neurobehavioral, cellular, and molecular consequences of single and multiple mild blast exposure. Electrophoresis 33: 3680-3692.
5. Renjini, A.P., et al. 2014. STAT3 and MCL-1 associate to cause a mesenchymal epithelial transition. J. Cell Sci. 127: 1738-1750.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.