

R-cadherin (N-19): sc-6456

BACKGROUND

The cadherins are a family of Ca⁺⁺-dependent adhesion molecules that function to mediate cell-cell binding critical to the maintenance of tissue structure and morphogenesis. Cadherins each contain a large extracellular domain at the amino terminus, which is characterized by a series of five homologous repeats, the most distal of which is thought to be responsible for binding specificity. The relatively short carboxy terminal, intracellular domain interacts with a variety of cytoplasmic proteins, including β -catenin, to regulate cadherin function. R-cadherin (for retinal-cadherin, also designated cadherin-4), which was first identified in the retina of chicken, has been shown to be involved in the development of striated muscle and potentially epithelia in addition to its involvement in retinal development.

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.
4. Ranscht, B. 1994. Cadherins and catenins: interactions and functions in embryonic development. *Curr. Opin. Cell Biol.* 6: 740-746.
5. Hinck, L., et al. 1994. Dynamics of cadherin/catenin complex formation: novel protein interactions and pathways of complex assembly. *J. Cell Biol.* 125: 1327-1340.
6. Ayalon, O., et al. 1994. Spatial and temporal relationships between cadherins and PECAM-1 in cell-cell junctions of human endothelial cells. *J. Cell Biol.* 126: 247-258.
7. Takeichi, M. 1995. Morphogenetic roles of classic cadherins. *Curr. Opin. Cell Biol.* 7: 619-627.

CHROMOSOMAL LOCATION

Genetic locus: CDH4 (human) mapping to 20q13.33; Cdh4 (mouse) mapping to 2 H4.

SOURCE

R-cadherin (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of R-cadherin of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-6456 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

R-cadherin (N-19) is recommended for detection of R-cadherin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

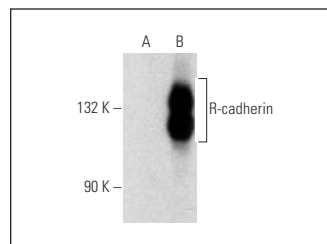
R-cadherin (N-19) is also recommended for detection of R-cadherin in additional species, including equine, canine and bovine.

Suitable for use as control antibody for R-cadherin siRNA (h): sc-37039, R-cadherin siRNA (m): sc-37040, R-cadherin shRNA Plasmid (h): sc-37039-SH, R-cadherin shRNA Plasmid (m): sc-37040-SH, R-cadherin shRNA (h) Lentiviral Particles: sc-37039-V and R-cadherin shRNA (m) Lentiviral Particles: sc-37040-V.

Molecular Weight of R-cadherin: 100 kDa.

Positive Controls: R-cadherin (m): 293 Lysate: sc-179392 or rat brain extract: sc-2392.

DATA



R-cadherin (N-19): sc-6456. Western blot analysis of R-cadherin expression in non-transfected: sc-110760 (A) and mouse R-cadherin transfected: sc-179392 (B) 293 whole cell lysates.

SELECT PRODUCT CITATIONS

1. Dorrell, M.I., et al. 2004. Adult bone marrow-derived stem cells use R-cadherin to target sites of neovascularization in the developing retina. *Blood* 103: 3420-3427.
2. Gliem, M., et al. 2006. Expression of classical cadherins in the cerebellar anlage: quantitative and functional aspects. *Mol. Cell. Neurosci.* 33: 447-458.

RESEARCH USE

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



Try **R-cadherin (D-9): sc-398306** or **R-cadherin (48): sc-136048**, our highly recommended monoclonal alternatives to R-cadherin (N-19).