

R-cadherin (D-9): sc-398306



The Power to Question

BACKGROUND

The cadherins are a family of Ca²⁺-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 catenin β , 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. 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.
4. 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.

CHROMOSOMAL LOCATION

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

SOURCE

R-cadherin (D-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 190-223 at the N-terminus of R-cadherin of human origin.

PRODUCT

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

R-cadherin (D-9) is available conjugated to agarose (sc-398306 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398306 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398306 PE), fluorescein (sc-398306 FITC), Alexa Fluor[®] 488 (sc-398306 AF488), Alexa Fluor[®] 546 (sc-398306 AF546), Alexa Fluor[®] 594 (sc-398306 AF594) or Alexa Fluor[®] 647 (sc-398306 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-398306 AF680) or Alexa Fluor[®] 790 (sc-398306 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398306 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

R-cadherin (D-9) is recommended for detection of R-cadherin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), 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).

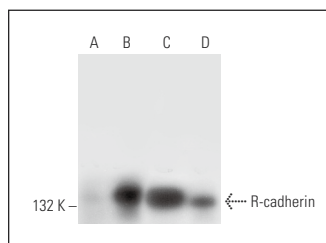
R-cadherin (D-9) is also recommended for detection of R-cadherin in additional species, including canine and bovine.

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.

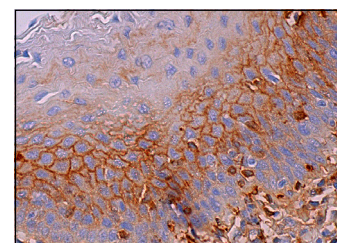
Molecular Weight of R-cadherin: 100 kDa.

Positive Controls: R-cadherin (m): 293 Lysate: sc-179392, human heart extract: sc-363763 or human brain extract: sc-364375.

DATA



R-cadherin (D-9): sc-398306. Western blot analysis of R-cadherin expression in non-transfected 293: sc-110760 (A) and mouse R-cadherin transfected 293: sc-179392 (B) whole cell lysates and human heart (C) and human brain (D) tissue extracts.



R-cadherin (D-9): sc-398306. Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing membrane staining of squamous epithelial cells.

SELECT PRODUCT CITATIONS

1. Christgen, M., et al. 2020. E-cadherin to P-cadherin switching in lobular breast cancer with tubular elements. *Mod. Pathol.* 33: 2483-2498.
2. Liu, S.C., et al. 2023. A 3-gene signature comprising CDH4, STAT4 and EBV-encoded LMP1 for early diagnosis and predicting disease progression of nasopharyngeal carcinoma. *Discov. Oncol.* 14: 119.

STORAGE

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

RESEARCH USE

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