

γ -catenin (B-7): sc-514130



The Power to Question

BACKGROUND

The catenins (α , β , γ and δ) are ubiquitously expressed, cytoplasmic proteins that associate with E-cadherin at cellular junctions. Catenin/cadherin complexes play an important role in mediating cellular adhesion. α -T-catenin, also referred to as VR22, is a 895-amino acid protein that is most abundantly expressed in cardiomyocytes and in the peritubular myoid cells of the testis. α -T-catenin binds to α -E-catenin as well as to β -catenin, and it functions to inhibit Wnt signaling. CTNNA3, the gene that encodes for α -T-catenin, is located on chromosome 10, and mutations in this gene show a strong correlation to late-onset Alzheimer's disease (LOAD) as well as to dilated cardiomyopathy.

REFERENCES

- Knudsen, K.A., Soler, A.P., Johnson, K.R. and Wheelock, M.J. 1995. Interaction of α -actinin with the cadherin/catenin cell-cell adhesion complex via α -catenin. *J. Cell Biol.* 130: 67-77.
- Brady-Kalnay, S.M., Rimm, D.L. and Tonks, N.K. 1995. Receptor protein tyrosine phosphatase PTPm associates with cadherins and catenins *in vivo*. *J. Cell Biol.* 130: 977-986.
- Breen, E., Steele, G. Jr. and Mercurio, A.M. 1995. Role of the E-cadherin/ α -catenin complex in modulating cell-cell and cell-matrix adhesive properties of invasive colon carcinoma cells. *Ann. Surg. Oncol.* 2: 378-385.
- Pierceall, W.E., Woodard, A.S., Morrow, J.S., Rimm, D. and Fearon, E.R. 1995. Frequent alterations in E-cadherin and α - and β -catenin expression in human breast cancer cell lines. *Oncogene* 11: 1319-1326.
- Ozawa, M., Nuruhi, K., Toyoyama, H. and Ohi, Y. 1995. Cloning of an alternative form of plakoglobin (γ -catenin) lacking the fourth armadillo repeat. *J. Biochem.* 118: 836-840.

CHROMOSOMAL LOCATION

Genetic locus: JUP (human) mapping to 17q21.2; Jup (mouse) mapping to 11 D.

SOURCE

γ -catenin (B-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 689-713 near the C-terminus of γ -catenin of human origin.

PRODUCT

Each vial contains 200 μ g IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514130 P, (100 μ g 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

γ -catenin (B-7) is recommended for detection of γ -catenin 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for γ -catenin siRNA (h): sc-29324, γ -catenin siRNA (m): sc-29932, γ -catenin shRNA Plasmid (h): sc-29324-SH, γ -catenin shRNA Plasmid (m): sc-29932-SH, γ -catenin shRNA (h) Lentiviral Particles: sc-29324-V and γ -catenin shRNA (m) Lentiviral Particles: sc-29932-V.

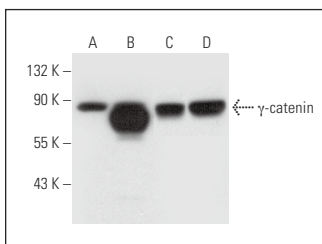
Molecular Weight of γ -catenin: 80-87 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, T-47D cell lysate: sc-2293 or MCF7 whole cell lysate: sc-2206.

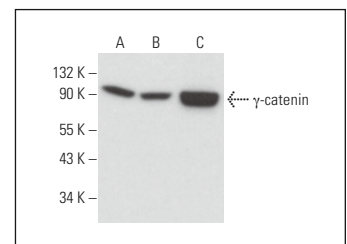
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



γ -catenin (B-7): sc-514130. Western blot analysis of γ -catenin expression in HeLa (A), A-431 (B), T-47D (C) and MCF7 (D) whole cell lysates.



γ -catenin (B-7): sc-514130. Western blot analysis of γ -catenin expression in MCF7 (A), HEK293 (B) and NCI-H292 (C) whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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