

γ -catenin (11E4): sc-59986

BACKGROUND

The catenins, α , β and γ , are proteins which bind to the highly conserved, intracellular cytoplasmic tail of E-cadherin. Together, the catenin/cadherin complexes play an important role in mediating cellular adhesion. α -catenin was initially described as an E-cadherin-associated protein, and has since been shown to associate with other members of the cadherin family, such as N-cadherin and P-cadherin. β -catenin associates with the cytoplasmic portion of E-cadherin, which is necessary for the function of E-cadherin as an adhesion molecule. β -catenin has also been found in complexes with the tumor suppressor protein APC. γ -catenin, also known as plakoglobin, binds with α -catenin and N-cadherin. It has been shown that the transmembrane phosphatase PTP μ associates with catenin/cadherin complexes and may regulate complex signaling.

REFERENCES

- Knudsen, K.A., et al. 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., et al. 1995. Receptor protein tyrosine phosphatase PTP μ associates with cadherins and catenins *in vivo*. *J. Cell Biol.* 130: 977-986.
- Breen, E., et al. 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., et al. 1995. Frequent alterations in E-cadherin and α - and β -catenin expression in human breast cancer cell lines. *Oncogene* 11: 1319-1326.
- Ozawa, M., et al. 1995. Cloning of an alternative form of plakoglobin (γ -catenin) lacking the fourth armadillo repeat. *J. Biochem.* 118: 836-840.
- Sacco, P.A., et al. 1995. Identification of plakoglobin domains required for association with N-cadherin and α -catenin. *J. Biol. Chem.* 270: 20201-20206.
- Takayama, T., et al. 1996. β -catenin expression in human cancers. *Am. J. Pathol.* 148: 39-46.
- LocusLink Report (LocusID: 1499). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

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

SOURCE

γ -catenin (11E4) is a mouse monoclonal antibody raised against recombinant γ -catenin of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

γ -catenin (11E4) is recommended for detection of γ -catenin 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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.

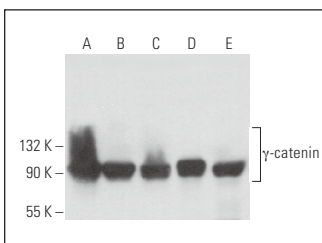
Molecular Weight of γ -catenin: 80-87 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, MCF7 whole cell lysate: sc-2206 or H4 cell lysate: sc-2408.

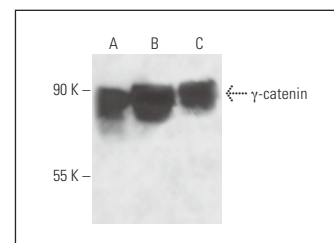
RECOMMENDED SUPPORT REAGENTS

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 (11E4): sc-59986. Western blot analysis of γ -catenin expression in T-47D (A), MCF7 (B), SK-BR-3 (C), NCI-H292 (D) and Hep G2 (E) whole cell lysates.



γ -catenin (11E4): sc-59986. Western blot analysis of γ -catenin expression in Jurkat (A), HT-1080 (B) and H4 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Xie, R., et al. 2017. Rufy3 promotes metastasis through epithelial-mesenchymal transition in colorectal cancer. *Cancer Lett.* 390: 30-38.

STORAGE

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