SANTA CRUZ BIOTECHNOLOGY, INC.

γ-catenin (15F11): sc-33634

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 mediating cellular adhesion. α-catenin was initially described as an E-cadherin associated protein, and since has 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, is a protein that binds with α-catenin and N-cadherin. It has been shown that the transmembrane phosphatase PTPμ associates with catenin/cadherin complexes and may regulate complex signaling.

REFERENCES

1. 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.
2. 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.

CHROMOSOMAL LOCATION

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

SOURCE

γ-catenin (15F11) is a mouse monoclonal antibody raised against recombinant γ-catenin of chicken origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

γ-catenin (15F11) is recommended for detection of γ-catenin of mouse, rat, human and avian origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

γ-catenin (15F11) is also recommended for detection of γ-catenin in additional species, including bovine and canine.

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.

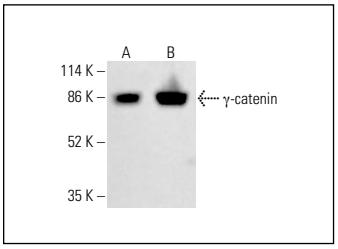
Molecular Weight of γ-catenin: 80-87 kDa.

Positive Controls: HCT-116 whole cell lysate: sc-364715, T-47D cell lysate: sc-2293 or HeLa whole cell lysate: sc-2200.

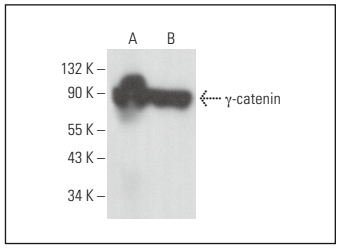
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 (15F11): sc-33634. Western blot analysis of γ-catenin expression in HeLa (**A**) and HCT-116 (**B**) whole cell lysates. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.



γ-catenin (15F11): sc-33634. Western blot analysis of γ-catenin expression in T-47D (**A**) and SK-BR-3 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Hao, X., et al. 2018. SOX30 is a key regulator of desmosomal gene suppressing tumor growth and metastasis in lung adenocarcinoma. J. Exp. Clin. Cancer Res. 37: 111.
2. Hu, F.F., et al. 2022. CBX2 and EZH2 cooperatively promote the growth and metastasis of lung adenocarcinoma. Mol. Ther. Nucleic Acids 27: 670-684.
3. Mighty, J., et al. 2022. Extracellular vesicles of human diabetic retinopathy retinal tissue and urine of diabetic retinopathy patients are enriched for the junction plakoglo bin protein. Front. Endocrinol. 13: 1077644.

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.

PROTOCOLS

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