

γ -catenin (A-6): sc-514115

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, 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.

CHROMOSOMAL LOCATION

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

SOURCE

γ -catenin (A-6) 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 IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

γ -catenin (A-6) is available conjugated to agarose (sc-514115 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514115 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514115 PE), fluorescein (sc-514115 FITC), Alexa Fluor[®] 488 (sc-514115 AF488), Alexa Fluor[®] 546 (sc-514115 AF546), Alexa Fluor[®] 594 (sc-514115 AF594) or Alexa Fluor[®] 647 (sc-514115 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-514115 AF680) or Alexa Fluor[®] 790 (sc-514115 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514115 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

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

APPLICATIONS

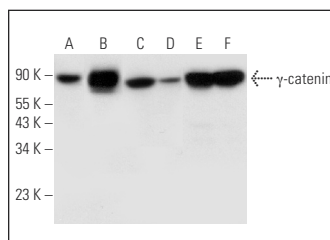
γ -catenin (A-6) is recommended for detection of γ -catenin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), 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).

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.

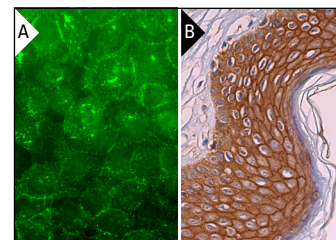
Molecular Weight of γ -catenin: 80-87 kDa.

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

DATA



γ -catenin (A-6): sc-514115. Western blot analysis of γ -catenin expression in HeLa (A), A-431 (B), HT-1080 (C), H4 (D), T-47D (E) and MCF7 (F) whole cell lysates.



γ -catenin (A-6): sc-514115. Immunofluorescence staining of formalin-fixed HeLa cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human vulva/anal skin tissue showing membrane and cytoplasmic staining of squamous epithelial cells (B).

SELECT PRODUCT CITATIONS

- Shen, M., et al. 2018. Cell-specific functions of ADAM17 regulate the progression of thoracic aortic aneurysm. *Circ. Res.* 123: 372-388.
- Tamiyakul, H., et al. 2020. Progressive proteome changes in the myocardium of a pig model for duchenne muscular dystrophy. *iScience* 23: 101516.
- Rogerson, C., et al. 2021. Akt1-associated actomyosin remodelling is required for nuclear lamina dispersal and nuclear shrinkage in epidermal terminal differentiation. *Cell Death Differ.* 28: 1849-1864.
- Yin, L., et al. 2022. KRT13 promotes stemness and drives metastasis in breast cancer through a plakoglobin/c-Myc signaling pathway. *Breast Cancer Res.* 24: 7.
- García-García, T., et al. 2022. Impairment of antiviral immune response and disruption of cellular functions by SARS-CoV-2 ORF7a and ORF7b. *iScience* 25: 105444.

RESEARCH USE

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