

# $\gamma$ -catenin (H-1): sc-8415



The Power to Question

## BACKGROUND

The catenins,  $\alpha$ ,  $\beta$  and  $\gamma$ , 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.  $\alpha$ -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.  $\beta$ -catenin associates with the cytoplasmic portion of E-cadherin, which is necessary for the function of E-cadherin as an adhesion molecule.  $\beta$ -catenin has also been found in complexes with the tumor suppressor protein APC.  $\gamma$ -catenin, also known as plakoglobin, binds with  $\alpha$ -catenin and N-cadherin. It has been shown that the transmembrane phosphatase PTP $\mu$  associates with catenin/cadherin complexes and may regulate complex signaling.

## REFERENCES

- Knudsen, K.A., et al. 1995. Interaction of  $\alpha$ -actinin with the cadherin/catenin cell-cell adhesion complex via  $\alpha$ -catenin. *J. Cell Biol.* 130: 67-77.
- Breen, E., et al. 1995. Role of the E-cadherin/ $\alpha$ -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.

## SOURCE

$\gamma$ -catenin (H-1) is a mouse monoclonal antibody raised against amino acids 30-109 mapping near the N-terminus of  $\gamma$ -catenin of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

$\gamma$ -catenin (H-1) is recommended for detection of  $\gamma$ -catenin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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  $\gamma$ -catenin siRNA (h): sc-29324,  $\gamma$ -catenin shRNA Plasmid (h): sc-29324-SH and  $\gamma$ -catenin shRNA (h) Lentiviral Particles: sc-29324-V.

Molecular Weight of  $\gamma$ -catenin: 80-87 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, A-431 whole cell lysate: sc-2201 or H4 cell lysate: sc-2408.

## RESEARCH USE

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

## STORAGE

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

## DATA



$\gamma$ -catenin (H-1): sc-8415. Western blot analysis of  $\gamma$ -catenin expression in MCF7 whole cell lysate.

$\gamma$ -catenin (H-1): sc-8415. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane and cell junction localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma showing membrane localization (B).

## SELECT PRODUCT CITATIONS

- Thelemann, A., et al. 2005. Phosphotyrosine signaling networks in epidermal growth factor receptor overexpressing squamous carcinoma cells. *Mol. Cell. Proteomics* 4: 356-376.
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- Lee, S.H., et al. 2008. Islet specific Wnt activation in human type II diabetes. *Exp. Diabetes Res.* 2008: 728763.
- Brackley, K.I., et al. 2011. Interactions between the Actin filament capping and severing protein gelsolin and the molecular chaperone CCT: evidence for nonclassical substrate interactions. *Cell Stress Chaperones* 16: 173-179.
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- Calaf, G.M., et al. 2013. Differential expression of cell adhesion molecules in an ionizing radiation-induced breast cancer model system. *Oncol. Rep.* 30: 285-291.
- Aizawa, S., et al. 2014. Heterogeneous and abnormal localization of desmosomal proteins in oral intraepithelial neoplasms. *J. Oral Sci.* 56: 209-214.
- Liu, B., et al. 2015. Expression profile of epithelial-mesenchymal transition markers in non-muscle-invasive urothelial carcinoma of the bladder: correlation with intravesical recurrence following transurethral resection. *Urol. Oncol.* 33: 110.e11-8.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.