

## Technical Data Sheet

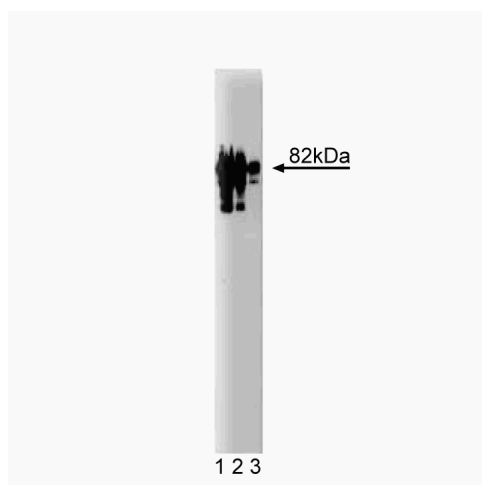
**Purified Mouse Anti- $\gamma$ -Catenin****Product Information**

<b>Material Number:</b>	<b>610254</b>
<b>Size:</b>	150 $\mu$ g
<b>Concentration:</b>	250 $\mu$ g/ml
<b>Clone:</b>	15/ $\gamma$ -Catenin
<b>Immunogen:</b>	Human $\gamma$ -Catenin aa. 553-738
<b>Isotype:</b>	Mouse IgG2a
<b>Reactivity:</b>	QC Testing: Human Tested in Development: Chicken, Dog, Mouse, Rat
<b>Target MW:</b>	82 kDa
<b>Storage Buffer:</b>	Aqueous buffered solution containing BSA, glycerol, and $\leq 0.09\%$ sodium azide.

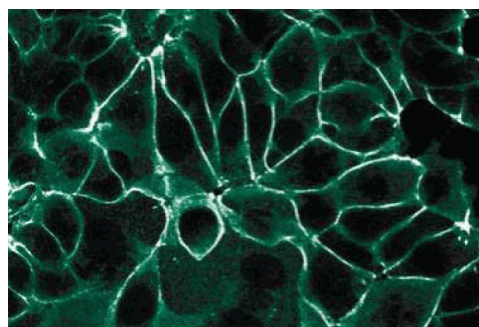
**Description**

$\gamma$ -Catenin (plakoglobin) was identified as a component of desmosomes where it associates with desmoglein.  $\gamma$ -Catenin and  $\beta$ -Catenin are closely related proteins that have significant homology with the Drosophila armadillo protein. In addition to complexing with E-Cadherin,  $\gamma$ -Catenin and  $\beta$ -Catenin have been observed in association with the intracellular domain of N-Cadherin. It has been proposed that one molecule of  $\alpha$ -Catenin and at least one molecule of  $\beta$ -Catenin and  $\gamma$ -Catenin simultaneously bind to a single cadherin molecule. A 19 amino acid sequence of desmoglein (Dsg1) was found to be critical for binding of  $\gamma$ -Catenin. This region has significant homology to the catenin-binding domain of classical cadherins, thus suggesting a common mechanism for  $\gamma$ -Catenin localization at both adherens junctions and desmosomes.

This antibody is routinely tested by western blot analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



**Western blot analysis of  $\gamma$ -Catenin on a HeLa lysate.**  
Lane 1: 1:2000, lane 2: 1:4000, lane 3: 1:8000 dilution of the anti-  $\gamma$ -Catenin antibody.



**Immunofluorescence staining of MCF7 cells.**

**Preparation and Storage**

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at  $-20^{\circ}$  C.

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## Application Notes

### Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development
Immunoprecipitation	Tested During Development
Immunohistochemistry	Not Recommended

## Suggested Companion Products

Catalog Number	Name	Size	Clone
611449	HeLa Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Igs	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Igs	0.5 mg	Polyclonal

## Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to [www.bdbiosciences.com/pharmingen/protocols](http://www.bdbiosciences.com/pharmingen/protocols) for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

## References

Mary S, Charrasse S, Meriane M, et al. Biogenesis of N-cadherin-dependent cell-cell contacts in living fibroblasts is a microtubule-dependent kinesin-driven mechanism. *Mol Biol Cell*. 2002; 13(1):285-301.(Biology: Western blot)

McCrea PD, Turck CW, Gumbiner B. A homolog of the armadillo protein in *Drosophila* (plakoglobin) associated with E-cadherin. *Science*. 1991; 254(5036):1359-1361.(Biology)

Merritt AJ, Berika MY, Zhai W, et al. Suprabasal desmoglein 3 expression in the epidermis of transgenic mice results in hyperproliferation and abnormal differentiation. *Mol Cell Biol*. 2002; 22(16):5846-5858.(Biology: Immunohistochemistry)

Muller T, Choidas A, Reichmann E, Ullrich A. Phosphorylation and free pool of beta-catenin are regulated by tyrosine kinases and tyrosine phosphatases during epithelial cell migration. *J Biol Chem*. 1999; 274(15):10173-10183.(Biology: Immunoprecipitation, Western blot)

Peng YF, Mandai K, Nakanishi H, et al. Restoration of E-cadherin-based cell-cell adhesion by overexpression of nectin in HSC-39 cells, a human signet ring cell gastric cancer cell line. *Oncogene*. 2002; 21(26):4108-4119.(Biology: Immunofluorescence, Western blot)