



Qty: 100 µg/200 µl

Mouse anti-Plakoglobin
(γ-Catenin)

Catalog No. 13-8500

Lot No.

Mouse anti-Plakoglobin (γ-Catenin)

FORM

This monoclonal antibody is supplied as a 200 µl aliquot at a concentration of 0.5 mg/ml in phosphate buffered saline, pH 7.4, containing 0.1% sodium azide. The antibody is highly purified from mouse ascites by protein A-affinity chromatography.

CLONE: PG-11E4

ISOTYPE: IgG₁-kappa

IMMUNOGEN

Fusion protein consisting of the maltose binding protein fused to full length human plakoglobin protein.

SPECIES REACTIVITY: Human & mouse.

TISSUES/LYSATES TESTED: HeLa cells, A431 cells, WI-38 human fibroblasts.

SPECIFICITY⁽⁷⁾

The antibody is specific for plakoglobin (~ 83 kDa) and does not appear to cross react with the related β-catenin protein (~92 kDa). The immuno-reactive epitope has been localized to a site between amino acids 45-114 of the human plakoglobin protein.

USAGE

The dilutions below are only starting recommendations. Optimal concentrations of this antibody should be determined by the investigator for each specific application.

Western Blotting: 1 µg/ml
Immunofluorescence⁽¹⁶⁾: 10 µg/ml
Immunoprecipitation:* 2-4 µg (for co-immunoprecipitation conditions see reference 7)

*Antibody can be utilized to co-immunoprecipitate plakoglobin in a complex with the desmosomal cadherins desmoglein (Dsg1) and desmocollin (Dsc3a), as well as with E-cadherin.

STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long term storage. Avoid repeated freezing and thawing.

(cont'd)

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BACKGROUND

Plakoglobin (γ -catenin) is an 83 kDa protein that localizes to the cytoplasmic face of both desmosomal and adherens junctions.⁽⁴⁾ Plakoglobin was first demonstrated to associate with the desmosomal cadherins, desmoglein and desmocollin, and was subsequently shown to associate with the classical cadherins E- and N-cadherin.^(3,4,7,8,9,15) Plakoglobin's interaction with E- and N-cadherin lead to its identification as the ~80 kDa protein originally called γ -catenin.⁽⁸⁾ Recent evidence indicates that the classical and desmosomal cadherins actually interact with distinct domains of the plakoglobin protein.⁽¹⁵⁾ Further, the desmosomal cadherins have been shown to regulate the accumulation of plakoglobin in the cell by decreasing its turnover rate.⁽⁷⁾ Plakoglobin (γ -catenin) is highly homologous to both β -catenin and the product of the *Drosophila* segment polarity gene armadillo.^(8,9,10,11,12) The Armadillo protein is part of a multiprotein junctional complex and is a required component of the *Drosophila wingless* (vertebrate Wnt-1) signal transduction pathway.^(2,10,12) Plakoglobin (γ -catenin) and β -catenin contain 13 copies of a 42-44 amino acid motif first identified in the Armadillo protein and referred to as armadillo repeats.^(2,10,12) These armadillo repeats not only mediate the interaction between β and γ -catenin and the cadherin cytoplasmic domain, but are also responsible for interactions with other cellular proteins.^(1,2,13,14)

REFERENCES

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RELATED PRODUCTS

Product	Clone/PAD	Cat. No.
Ms x β -Catenin	CAT-5H10	13-8400
Ms x β -Catenin (CT)	CAT-15	71-2700
Ms x α -Catenin	α CAT-7A4	13-9700
Rb x α -Catenin	ZER2	71-1200
Ms x p120ctn (NT)	15D3	33-9600
Ms x p120ctn (CT)	6H11	33-9700
Ms x E-Cadherin	4A2C7	33-4000
Rb x pan-Cadherin	ZyPC7	71-7100
Product	Conjugate	Cat. No.
Goat anti-Mouse IgG (H+L) (ZyMAX™ Grade)	Purified	81-6500
	FITC	81-6511
	TRITC	81-6514
	Cy™3	81-6515
	Cy™5	81-6516
	HRP	81-6520
	AP	81-6522
	Biotin	81-6540
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

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