

Anti-γ-Catenin (Tyr-550), Phosphospecific Antibody
Catalog # AN1682**Specification**

Anti-γ-Catenin (Tyr-550), Phosphospecific Antibody - Product Information

Application	WB
Primary Accession	P14923
Reactivity	Bovine
Host	Rabbit
Clonality	Rabbit Polyclonal
Isotype	IgG
Calculated MW	81745

Anti-γ-Catenin (Tyr-550), Phosphospecific Antibody - Additional Information

Gene ID	3728
Other Names	
Plakoglobin, JUP, Desmoplakin III, Desmoplakin-3, catenin gamma1	

Target/Specificity

Plakoglobin (γ-Catenin) is a catenin family member identified as a component of desmosomes. γ-Catenin has high homology to β-catenin and, like β-catenin, it can associate with the cadherins, E-cadherin and N-cadherin. One molecule of α-catenin and at least one molecule of β-catenin and γ-Catenin simultaneously bind to a single cadherin molecule. A 19-amino acid sequence of desmoglein was found to be critical for binding of γ-Catenin. Similar catenin-binding domains found in cadherins, suggest a common mechanism for γ-Catenin localization to both adherens junctions and desmosomes. Phosphorylation of tyrosine residues in γ-Catenin can modify its interactions with other proteins. Phosphorylation of tyrosine 644 decreases γ-Catenin association with α-catenin, but increases binding to desmoplakin. Fer kinase can phosphorylate tyrosine 550, which increases γ-Catenin binding to α-catenin. Thus, tyrosine phosphorylation may be important for regulation of γ-Catenin protein-protein interactions within desmosomal complexes.

Dilution

WB~~1:1000

Format

Antigen Affinity Purified

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Anti-γ-Catenin (Tyr-550), Phosphospecific Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping

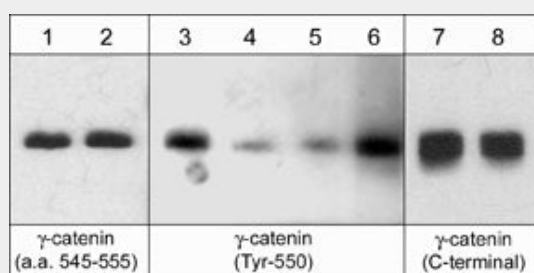
Blue Ice

Anti-γ-Catenin (Tyr-550), Phosphospecific Antibody - Protocols

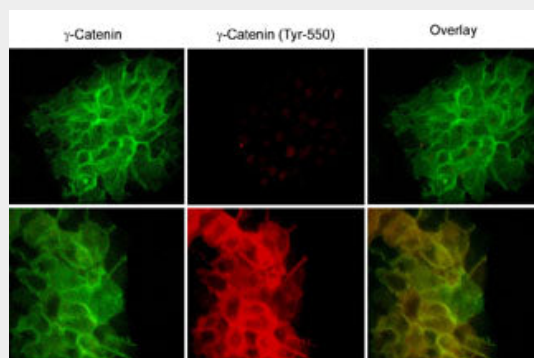
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-γ-Catenin (Tyr-550), Phosphospecific Antibody - Images



Western blot analysis of anti-γ-Catenin (C-terminal) immunoprecipitates from pervanadate-treated A431. The immunoprecipitates were untreated (lanes 1,3,7) or treated with alkaline phosphatase (lanes 2,4,8). The blots were probed with γ-Catenin (a.a. 545-555), γ-Catenin (Tyr-550) or γ-Catenin (C-terminal) antibodies. The anti-γ-Catenin (Tyr-550) was used in the presence of γ-Catenin (Tyr-550) (lane 5) or γ-Catenin (Tyr-644) (lane 6) peptides.



Immunocytochemical labeling of phosphorylated γ-Catenin in control (Top) and pervanadate-treated (Bottom) A431 cells. The cells were co-labeled with mouse monoclonal γ-Catenin (CM1111) or rabbit polyclonal γ-Catenin (Tyr-550) antibodies, then the antibodies were detected using appropriate secondary antibodies conjugated to Cy2 or Cy3.

Anti-γ-Catenin (Tyr-550), Phosphospecific Antibody - Background

Plakoglobin (γ-Catenin) is a catenin family member identified as a component of desmosomes. γ-Catenin has high homology to β-catenin and, like β-catenin, it can associate with the cadherins, E-cadherin and N-cadherin. One molecule of α-catenin and at least one molecule of β-catenin and γ-Catenin simultaneously bind to a single cadherin molecule. A 19-amino acid sequence of desmoglein was found to be critical for binding of γ-Catenin. Similar catenin-binding domains found in cadherins, suggest a common mechanism for γ-Catenin localization to both adherens junctions and desmosomes. Phosphorylation of tyrosine residues in γ-Catenin can modify its interactions with

other proteins. Phosphorylation of tyrosine 644 decreases γ -Catenin association with α -catenin, but increases binding to desmoplakin. Fer kinase can phosphorylate tyrosine 550, which increases γ -Catenin binding to α -catenin. Thus, tyrosine phosphorylation may be important for regulation of γ -Catenin protein-protein interactions within desmosomal complexes.