

γ -Catenin Phospho-Regulation Antibody Sampler Kit

Catalog # CK6150

Kit Components:

Catalog#	Description	Host	Size	Applications	Species Reactivity	MW (kDa)
CP1081	γ -Catenin (Tyr-133)/ β -Catenin (Tyr-142), phospho-specific	Rabbit pAb	50 μ l	WB, E	H, R, M	84
CP2961	γ -Catenin (Tyr-480)/ β -Catenin (Tyr-489), phospho-specific	Rabbit pAb	50 μ l	WB, E	H, R, M, F, C	84
CP1121	γ -Catenin (Tyr-550) phospho-specific	Rabbit pAb	50 μ l	WB, E	H, R, M, F	84
CM1111	γ -Catenin (C-terminal)	Mouse mAb	50 μ l	WB, E, IP	H, R, M	84
CP2971	γ -Catenin (a.a. 545-555)	Rabbit pAb	50 μ l	WB, E	H, R, M, F	84

Applications: WB = Western blot, E = ELISA.

Species: H = Human, R = Rat, M = Mouse, C = Chicken, F = Frog

Kit Summary:

The γ -Catenin phospho-regulation antibody sampler kit can be used to examine phosphorylation of γ -Catenin at Tyr-133, Tyr-480, and Tyr-550. The kit also includes monoclonal and polyclonal antibodies to monitor total expression levels of γ -Catenin.

Buffers and Storage:

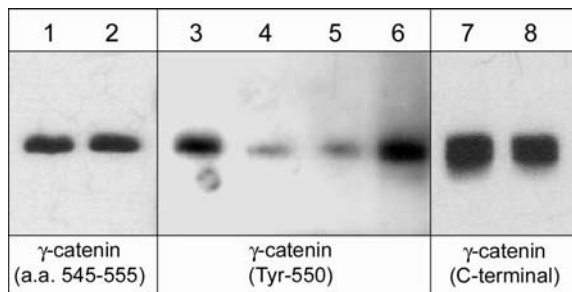
Mouse monoclonal and rabbit polyclonal antibodies are supplied in 50 μ l phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C . Do not aliquot. Stable for 1 year.

Background:

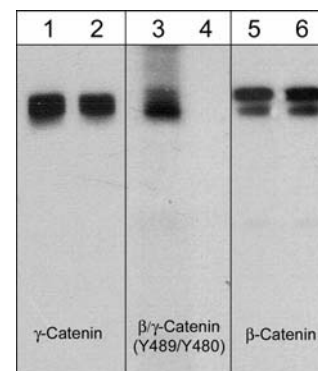
Plakoglobin (γ -catenin) is a catenin family member identified as a component of desmosomes. γ -Catenin has high homology to β -catenin and, like β -catenin, it can associate with the cadherins, E-cadherin and N-cadherin. One molecule of α -catenin and at least one molecule of β -catenin and γ -catenin 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 (Tyr-133, Tyr-480, Tyr-550, Tyr-644) in γ -catenin can modify its interactions with other proteins. Phosphorylation of Tyr-644 decreases γ -catenin association with α -catenin, but increases binding to desmoplakin. Fer kinase can phosphorylate Tyr-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.

References:

McCrea, P.D., et al. (1991) Science 254:1359.
Miravet, S. et al. (2003) Mol. Cell. Biol. 23(20) :7391.



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



Western blot analysis of A431 cells stimulated with pervanadate (1 mM) for 30 min (lanes 1, 3, & 5) then treated with alkaline phosphatase (lanes 2, 4, & 6). The blot was probed with anti- γ -Catenin (CM1111), anti- β -Catenin (Tyr-489) conserved site (CP2961), or anti- β -Catenin (CM1181).

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