

**Anti- $\beta$ -Catenin (Tyr-654) [ $\gamma$ -Catenin (Tyr-644)], Phosphospecific Antibody**  
Catalog # AN1680**Specification****Anti- $\beta$ -Catenin (Tyr-654) [ $\gamma$ -Catenin (Tyr-644)], Phosphospecific Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P35222</a>
Reactivity	Bovine, Chicken, Drosophila, C.Elegans
Host	Rabbit
Clonality	Rabbit Polyclonal
Isotype	IgG
Calculated MW	85497

**Anti- $\beta$ -Catenin (Tyr-654) [ $\gamma$ -Catenin (Tyr-644)], Phosphospecific Antibody - Additional Information**Gene ID **1499****Other Names**

Catenin beta1, CTNNB1, catenin

**Target/Specificity**

$\beta$ -Catenin is a 92 kDa protein that binds to the cytoplasmic tail of E-Cadherin. The cadherins, transmembrane adhesion molecules, are found with catenins at adherens junctions. Deletions in the cytoplasmic domain of E-Cadherin eliminate catenin binding and result in a loss of cell adhesion. Tyrosine phosphorylation of  $\beta$ -Catenin can regulate its interaction with critical components of adherens junctions. Both Fer and Fyn kinases phosphorylate tyrosine 142 in vitro. Overexpression of these kinases in epithelial cells disrupts interactions between  $\alpha$ - and  $\beta$ -Catenins. The phosphorylation of tyrosine 142 may act as a switch from the transcriptional to the adhesive role of  $\beta$ -Catenin. Src family kinases can also phosphorylate tyrosine 86 and 654 in  $\beta$ -Catenin. The Tyr-654 phosphorylation regulates  $\beta$ -Catenin binding to E-cadherin. Thus, site-specific tyrosine phosphorylation of  $\beta$ -Catenin may regulate protein-protein interactions leading to changes in cell adhesion.

**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- $\beta$ -Catenin (Tyr-654) [ $\gamma$ -Catenin (Tyr-644)], Phosphospecific Antibody is for research use only and not for use in diagnostic or therapeutic procedures.**Shipping**

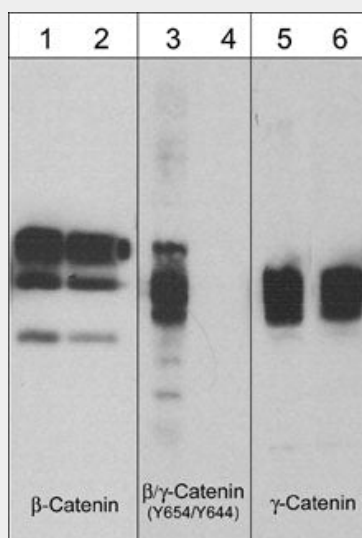
Blue Ice

**Anti- $\beta$ -Catenin (Tyr-654) [ $\gamma$ -Catenin (Tyr-644)], Phosphospecific Antibody - Protocols**

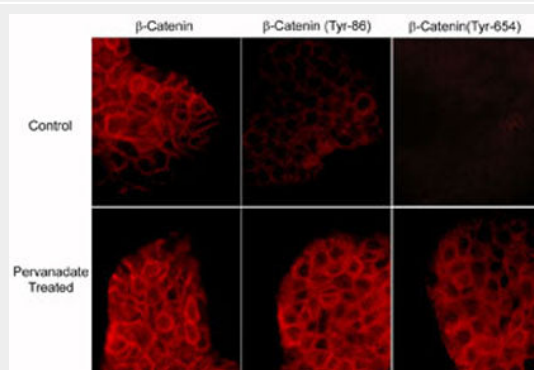
Provided below are standard protocols that you may find useful for product applications.

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

### Anti- $\beta$ -Catenin (Tyr-654) [ $\gamma$ -Catenin (Tyr-644)], Phosphospecific Antibody - Images



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- $\beta$ -Catenin (CM1181) (lanes 1 & 2), anti- $\beta$ -Catenin (Tyr-654) (CP4021) (lanes 3 & 4), or anti- $\gamma$ -Catenin (CM1111) (lanes 5 & 6).



Immunocytochemical labeling of phosphorylated  $\beta$ -Catenin in control and pervanadate-treated A431 cells. The cells were labeled with mouse monoclonal  $\beta$ -Catenin (CM1181) or rabbit polyclonal  $\beta$ -Catenin (Tyr-86) or  $\beta$ -Catenin (Y654) antibodies, then the antibodies were detected using appropriate secondary antibodies conjugated to Cy3.

### Anti- $\beta$ -Catenin (Tyr-654) [ $\gamma$ -Catenin (Tyr-644)], Phosphospecific Antibody - Background

$\beta$ -Catenin is a 92 kDa protein that binds to the cytoplasmic tail of E-Cadherin. The cadherins, transmembrane adhesion molecules, are found with catenins at adherens junctions. Deletions in

the cytoplasmic domain of E-Cadherin eliminate catenin binding and result in a loss of cell adhesion. Tyrosine phosphorylation of  $\beta$ -Catenin can regulate its interaction with critical components of adherens junctions. Both Fer and Fyn kinases phosphorylate tyrosine 142 in vitro. Overexpression of these kinases in epithelial cells disrupts interactions between  $\alpha$ - and  $\beta$ -Catenins. The phosphorylation of tyrosine 142 may act as a switch from the transcriptional to the adhesive role of  $\beta$ -Catenin. Src family kinases can also phosphorylate tyrosine 86 and 654 in  $\beta$ -Catenin. The Tyr-654 phosphorylation regulates  $\beta$ -Catenin binding to E-cadherin. Thus, site-specific tyrosine phosphorylation of  $\beta$ -Catenin may regulate protein-protein interactions leading to changes in cell adhesion.