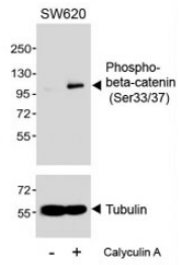
Phospho-Beta-Catenin pS33/pS37 Antibody / Phospho-CTNNB1 Polyclonal Antibody (F53961)

Catalog No.	Formulation	Size
F53961-0.2ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.2 ml
F53961-0.05ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.05 ml

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Predicted Reactivity	Mouse, Rat, Bovine
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
UniProt	P35222
Applications	Western blot: 1:500-1000
Limitations	This Phospho-Beta-Catenin pS33/pS37 Antibody / Phospho-CTNNB1 Polyclonal Antibody is available for research use only.



Phospho-Beta-Catenin pS33/pS37 Antibody by WB in Calyculin A-Treated SW620 Cells. Western blot analysis of human SW620 cell lysates, untreated (lane 1) or treated with 100 nM Calyculin A for 30 minutes (lane 2), using Phospho-CTNNB1 Polyclonal Antibody at a dilution of 1:1000. A prominent band at approximately 95-100 kDa is detected in the treated sample, with little to no signal in the untreated control. Calyculin A inhibits protein phosphatases, promoting the accumulation of phosphorylated beta-catenin at Ser33 and Ser37. Tubulin serves as a loading control, demonstrating comparable protein loading between the two samples.

Description

Phospho-Beta-Catenin pS33/pS37 Antibody recognizes beta-catenin phosphorylated at serine 33 and serine 37, two regulatory residues involved in controlling protein stability and canonical Wnt signaling. Beta-catenin, encoded by the CTNNB1 gene, is a multifunctional protein that participates in cell adhesion, transcriptional regulation, and developmental

signaling. Phosphorylation of its N-terminal region determines whether cytoplasmic beta-catenin undergoes degradation or accumulates to activate Wnt-responsive genes.

In the absence of Wnt stimulation, beta-catenin associates with a destruction complex containing adenomatous polyposis coli (APC), AXIN, glycogen synthase kinase 3 beta (GSK3 beta), and casein kinase 1 (CK1). CK1 initially phosphorylates beta-catenin at Ser45, priming subsequent GSK3 beta-mediated phosphorylation at Thr41, Ser37, and Ser33. These sequential modifications generate a recognition motif for the beta-transducin repeat-containing protein (beta-TrCP), a substrate recognition component of the SCF ubiquitin ligase complex.

Recognition of phosphorylated CTNNB1 by beta-TrCP promotes polyubiquitination and subsequent proteasomal degradation. This process maintains low cytoplasmic beta-catenin levels and prevents inappropriate activation of Wnt-dependent transcription. The phosphorylation state of Ser33 and Ser37 therefore provides an important indicator of beta-catenin regulation through the destruction pathway.

When canonical Wnt signaling is activated, receptor-associated events inhibit destruction complex activity, reducing phosphorylation-dependent beta-catenin turnover. Stabilized beta-catenin accumulates and translocates into the nucleus, where it interacts with TCF/LEF transcription factors to regulate genes involved in cell proliferation, differentiation, and tissue development. Alterations in this regulatory mechanism are associated with colorectal cancer and other malignancies involving abnormal CTNNB1 signaling.

Phosphorylation-specific analysis helps distinguish beta-catenin targeted for degradation from the broader pool of CTNNB1 involved in adhesion and signaling. A Phospho-CTNNB1 Polyclonal Antibody is therefore relevant to studies of GSK3 beta activity, Wnt pathway regulation, and phosphorylation-dependent protein turnover.

A Phospho-Beta-Catenin pS33/pS37 Antibody from NSJ Bioreagents supports investigations of CTNNB1 phosphorylation, beta-TrCP-mediated recognition, proteasomal degradation, and the molecular mechanisms controlling canonical Wnt signaling.

This antibody complements our Beta-Catenin Antibody / CTNNB1 Antibody (clone CTNNB1/2030R) for broader analysis of CTNNB1 expression and localization.

Application Notes

Titration of the Phospho-Beta-Catenin pS33/pS37 Antibody / Phospho-CTNNB1 Polyclonal Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A synthetic peptide corresponding to amino acids surrounding pS33 and pS37 from the human protein was used as the immunogen for the Phospho-Beta-Catenin pS33/pS37 Antibody.

Storage

Aliquot the Phospho-Beta-Catenin pS33/pS37 Antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

Phospho-CTNNB1 antibody, Phospho-Beta-Catenin Ser33/Ser37 antibody, Phosphorylated Beta-Catenin antibody, Beta-Catenin pS33/pS37 antibody, Phospho-Catenin Beta 1 antibody, Phospho-Beta-Catenin S33/S37 antibody

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