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PRODUCT DATASHEET

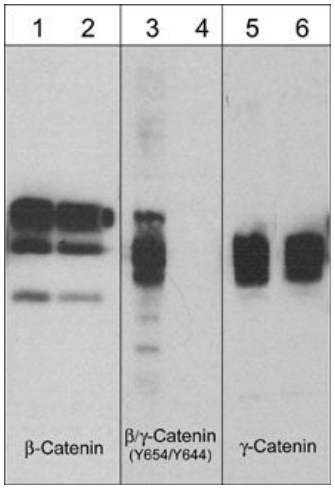
Anti-β-Catenin (Tyr-654) [γ-Catenin (Tyr-644)], Phosphospecific Antibody

Product Details

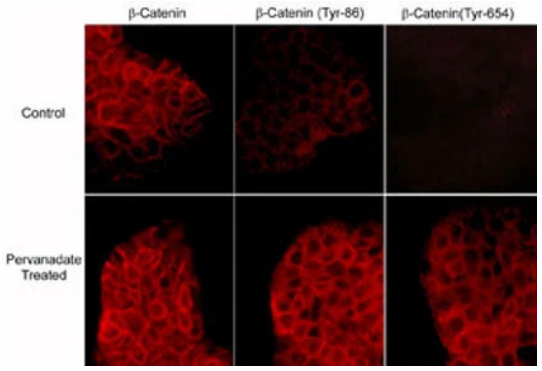
Available Variants	100 µL (SKU:CP4021)
Conjugate	Unconjugated
Isotype	IgG
Gene Name	CTNNB1
Host Species	Rabbit
Format	Antigen Affinity Purified
Physical State	Liquid
Buffer	PBS + 1 mg/ml BSA, 0.05% NaN3 and 50% glycerol
Applications	ELISA, ICC, WB
Dilution Ranges	WB: 1:1000 ICC: 1:200
Species Reactivity	Chicken, Frog, Human, Mouse, Rat
Immunogen	Phospho-β-Catenin (Tyr-654) synthetic peptide corresponds to amino acid residues around tyrosine 654 of human β-Catenin. This peptide sequence is highly conserved in rat, mouse, chicken, and frog β-Catenins, and has high homology to the conserved site in γ-Catenin (Tyr-644).
Specificity	This antibody was cross-adsorbed to phospho-β-Catenin (Tyr-86) peptide before affinity purification using phospho-β-Catenin (Tyr-654) peptide (without carrier). The antibody detects 84 and 88kDa* proteins corresponding to the molecular mass of γ-Catenin and β-Catenin, respectively, on SDS-PAGE immunoblots of A431 cells treated with pervanadate, but does not detect these proteins in control cells.
Molecular Weight	84/88

Quality Control	Western blots performed on each lot.
Storage	Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol. Stable for at least 1 year at -20°C.
UniProt ID	P35222 UniProt Summary: Key downstream component of the canonical Wnt signaling pathway. In the absence of Wnt, forms a complex with AXIN1, AXIN2, APC, CSNK1A1 and GSK3B that promotes phosphorylation on N-terminal Ser and Thr residues and ubiquitination of CTNNB1 via BTRC and its subsequent degradation by the proteasome. In the presence of Wnt ligand, CTNNB1 is not ubiquitinated and accumulates in the nucleus, where it acts as a coactivator for transcription factors of the TCF/LEF family, leading to activate Wnt responsive genes. Also acts as a coactivator for other transcription factors, such as NR5A2. Promotes epithelial to mesenchymal transition/mesenchymal to epithelial transition (EMT/MET) via driving transcription of CTNNB1/TCF-target genes. Involved in the regulation of cell adhesion, as component of an E-cadherin:catenin adhesion complex. Acts as a negative regulator of centrosome cohesion. Involved in the CDK2/PTPN6/CTNNB1/CEACAM1 pathway of insulin internalization. Blocks anoikis of malignant kidney and intestinal epithelial cells and promotes their anchorage-independent growth by down-regulating DAPK2. Disrupts PML function and PML-NB formation by inhibiting RANBP2-mediated sumoylation of PML. Promotes neurogenesis by maintaining sympathetic neuroblasts within the cell cycle. Involved in chondrocyte differentiation via interaction with SOX9: SOX9-binding competes with the binding sites of TCF/LEF within CTNNB1, thereby inhibiting the Wnt signaling. Acts as a positive regulator of odontoblast differentiation during mesenchymal tooth germ formation, via promoting the transcription of differentiation factors such as LEF1, BMP2 and BMP4. Activity is repressed in a MSX1-mediated manner at the bell stage of mesenchymal tooth germ formation which prevents premature differentiation of odontoblasts.
Country of Origin	United States
Shipping	Blue Ice
Expiration	After date of receipt, stable for at least 1 year at -20°C.
Usage Statement	For research use only. Not intended for therapeutic or diagnostic use. Use of all products is subject to our terms and conditions, which can be viewed on our website.
Post Translational Modification Type	Phosphorylated
Post Translational Modification Residue	Tyr-654
NCBI Gene ID	1499

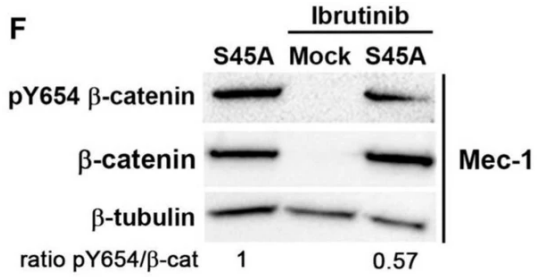
Product Images



Western blot analysis of A431 cells stimulated with pervanadate (1 mM) for 30 min (lanes 1, 3, & 5) then treated with akaline phosphatase (lanes 2, 4, & 6). The blot was probed with anti-β-Catenin (CM1181) (lanes 1 & 2), anti-β-Catenin (Tyr-654) (CP4021) (lanes 3 & 4), or anti-γ-Catenin (CM1111) (lanes 5 & 6).



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



An analysis of the phosphorylation of β-catenin at Y654 in Mec-1 cells transfected with the S45A mutant or an empty plasmid (mock). Where indicated, the cells were pretreated or not with ibrutinib (100 nM) for 1 h. The Western blot is representative of 3 independent experiments. Image from publication CC-BY-4.0. PMID: 38139452