

ARG62681 anti-beta Catenin antibody [EM-22]

Package: 100 µg
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [EM-22] recognizes beta Catenin
Tested Reactivity	Hu, Ms, Hm
Tested Application	FACS, ICC/IF, IP, WB
Specificity	The clone EM-22 reacts with C-terminal part of beta-catenin, an 88 kDa multifunctional protein involved both in cell adhesion and in activation of transcription.
Host	Mouse
Clonality	Monoclonal
Clone	EM-22
Isotype	IgG1
Target Name	beta Catenin
Species	Human
Immunogen	Recombinant human beta-catenin
Conjugation	Un-conjugated
Alternate Names	CTNNB; armadillo; MRD19; Catenin beta-1; Beta-catenin

Application Instructions

Application table	Application	Dilution
	FACS	1 - 4 µg/ml
	ICC/IF	Assay-dependent
	IP	Assay-dependent
	WB	Assay-dependent
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Positive Control	WB: HT29, FHC, DLD1, KW1, C57MG and 3T3. ICC/IF: HT29	

Properties

Form	Liquid
Purification	Purified from cell culture supernatant by protein-A affinity chromatography.
Purity	> 95% (by SDS-PAGE)
Buffer	PBS (pH 7.4) and 15 mM Sodium azide

Preservative	15 mM Sodium azide
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Database links	GeneID: 12387 Mouse GeneID: 1499 Human Swiss-port # P35222 Human Swiss-port # Q02248 Mouse
Gene Symbol	CTNNB1
Gene Full Name	catenin (cadherin-associated protein), beta 1, 88kDa
Background	Beta-catenin is a multifunctional protein involved both in cell adhesion and in activation of transcription. Calcium-dependent intercellular adhesion transmembrane glycoprotein E-cadherin interacts by its cytoplasmic domain with reciprocally bound alpha, beta and gamma catenin. Beta-catenin links this complex through alpha-actinin to the cytoskeleton. Functional cadherin-catenin system is important for invasiveness of tumour cells. Beta-catenin level in cytoplasm is controlled by glycogen synthase kinase-3 beta. When activity of this kinase is blocked (e.g. by excessive stimulation of Wnt signaling pathway), hypophosphorylated stable form of beta-catenin accumulates in the cytoplasm, translocates to the nucleus and activates transcription of genes including those that are involved in cell cycle control. As a result, cell division and neoplastic transformation are promoted.
Function	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. Involved in the regulation of cell adhesion. 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 (PubMed:17524503, PubMed:18077326, PubMed:18086858, PubMed:18957423, PubMed:21262353, PubMed:22647378, PubMed:22699938, PubMed:22155184). Promotes neurogenesis by maintaining sympathetic neuroblasts within the cell cycle (By similarity). [UniProt]
Highlight	<p>Related products: beta Catenin antibodies; beta Catenin Duos / Panels; Anti-Mouse IgG secondary antibodies;</p> <p>Related news: Besides tumor suppression, what's p53 busy for during embryogenesis? Wnt / beta-catenin signaling for gastric fundus specification</p>
Research Area	Cancer antibody; Cell Biology and Cellular Response antibody; Developmental Biology antibody; Neuroscience antibody; Signaling Transduction antibody
Calculated Mw	85 kDa
PTM	Phosphorylation at Ser-552 by AMPK promotes stabilization of the protein, enhancing TCF/LEF-mediated transcription (By similarity). Phosphorylation by GSK3B requires prior phosphorylation of Ser-45 by another kinase. Phosphorylation proceeds then from Thr-41 to Ser-37 and Ser-33. Phosphorylated by NEK2. EGF stimulates tyrosine phosphorylation. Phosphorylation on Tyr-654 decreases CDH1 binding and enhances TBP binding. Phosphorylated on Ser-33 and Ser-37 by HIPK2 and GSK3B, this phosphorylation triggers proteasomal degradation (PubMed:25169422). Phosphorylation on Ser-191 and Ser-246 by CDK5. Phosphorylation by CDK2 regulates insulin internalization. Phosphorylation by PTK6 at Tyr-64, Tyr-142, Tyr-331 and/or Tyr-333 with the predominant site at Tyr-64 is not essential for

inhibition of transcriptional activity.

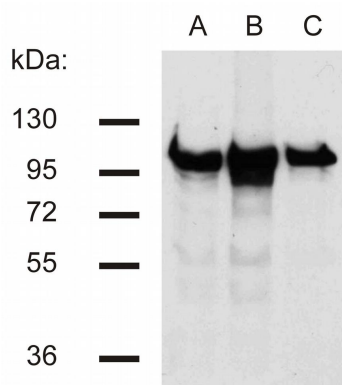
Ubiquitinated by the SCF(BTRC) E3 ligase complex when phosphorylated by GSK3B, leading to its degradation. Ubiquitinated by a E3 ubiquitin ligase complex containing UBE2D1, SIAH1, CACYBP/SIP, SKP1, APC and TBL1X, leading to its subsequent proteasomal degradation (By similarity).

S-nitrosylation at Cys-619 within adherens junctions promotes VEGF-induced, NO-dependent endothelial cell permeability by disrupting interaction with E-cadherin, thus mediating disassembly adherens junctions.

O-glycosylation at Ser-23 decreases nuclear localization and transcriptional activity, and increases localization to the plasma membrane and interaction with E-cadherin CDH1.

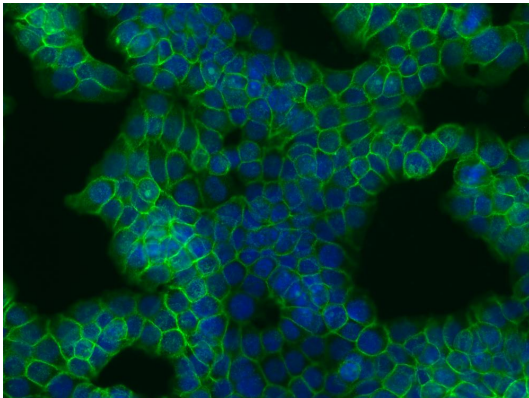
Deacetylated at Lys-49 by SIRT1.

Images



ARG62681 anti-beta Catenin antibody [EM-22] WB image

Western blot: A. Murine 3T3 cell lysate, B. C57 cell lysate, C. KW1 cell lysate stained with ARG62681 anti-beta Catenin antibody [EM-22].



ARG62681 anti-beta Catenin antibody [EM-22] ICC/IF image

Immunofluorescence: HT-29 cells stained with ARG62681 anti-beta Catenin antibody [EM-22] (green)
Cell nuclei was stained with DAPI (blue).