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[Primary Antibody]

Rabbit Anti-CTNNA1 antibody

Catalog Number: SL1594R

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	CTNNA1
Immunogen:	KLH conjugated synthetic peptide derived from human Catenin: 801-906/906
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	IHC-P=1:100-500 IHC-F=1:100-500 IF=1:100-500 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Rat(predicted:Human,Mouse,Chicken,Dog,Pig,Horse,Rabbit)
Predicted MW.:	102kDa
Subcellular Location:	cytoplasmic The cell membrane
Background:	The distinct peripheral cytosolic proteins, alpha, beta and gamma-catenin (102, 94 and 86 kDa) found in many tissues bind to the conserved cytoplasmic tail domain of the cell-adhesion cadherins. Catenins link E-cadherin to other integral membrane or cytoplasmic proteins and are modulated by Wnt-1 proto-oncogene. They are good candidates for mediating transduction of cell-cell contact positional signals to the cell interior. Absence of alpha-catenin is found in certain tumor cell lines and reduced levels in certain human carcinomas. Beta-catenin binds directly to the cytoplasmic tail of E-cadherin. It binds to the N-terminus of alpha-catenin and interacts with the protein product of the tumor suppressor gene APC. This interaction involves a 15-aa repeat in the APC. Beta-catenin cell levels seem to be controlled by APC. The central core region of beta-catenin is involved in mediation of cadherin-catenin complex interaction with EGFR.

Important Note: This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

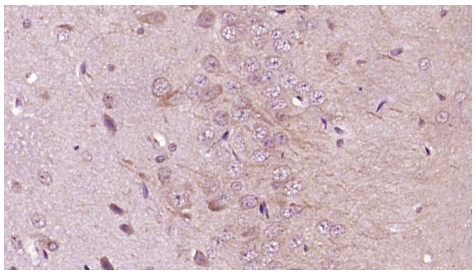
	Function: Associates with the cytoplasmic domain of a variety of cadherins. The association of catenins to cadherins produces a complex which is linked to the actin filament network, and which seems to be of primary importance for cadherins cell-adhesion properties. Can associate with both E- and N-cadherins. Originally believed to be a stable component of E-cadherin/catenin adhesion complexes and to mediate the linkage of cadherins to the actin cytoskeleton at adherens junctions. In contrast, cortical actin was found to be much more dynamic than E-cadherin/catenin complexes and CTNNA1 was shown not to bind to F-actin when assembled in the complex suggesting a different linkage between actin and adherens junctions components. The homodimeric form may regulate actin filament assembly and inhibit actin branching by competing with the Arp2/3 complex for binding to actin filaments. May play a crucial role in cell differentiation. **Subunit:** Monomer and homodimer; the monomer preferentially binds to CTNNB1 and the homodimer to actin. Binds MLLT4 and F-actin. Possible component of an E-cadherin/ catenin adhesion complex together with E-cadherin/CDH1 and beta-catenin/CTNNB1 or gamma-catenin/JUP; the complex is located to adherens junctions. The stable association of CTNNA1 is controversial as CTNNA1 was shown not to bind to F-actin when assembled in the complex. Alternatively, the CTNNA1-containing complex may be linked to F-actin by other proteins such as LIMA1. Interacts with ARHGAP21 and with AJUBA. Interacts with LIMA1. **Subcellular Location:** Cytoplasm, cytoskeleton. Cell junction, adherens junction. Cell membrane; Peripheral membrane protein; Cytoplasmic side. Cell junction. Note=Found at cell-cell boundaries and probably at cell-matrix boundaries. **Tissue Specificity:** Expressed ubiquitously in normal tissues. **Post-translational modifications:** Sumoylated. **Similarity:** Belongs to the vinculin/alpha-catenin family. **Database links:** **Entrez Gene:** 1495 Human **Entrez Gene:** 12385 Mouse **Entrez Gene:** 307505 Rat Omim: 116805 Human **SwissProt:** P35221 Human **SwissProt:** P26231 Mouse Cell Adhesion Protein α-catenin is a multifunctional protein that can link E-\N-\P-Cadherin, has the dual function of being involved in cell adhesion and mediating signal

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	transduction, and is associated with the occurrence, development and infiltration of tumors. It can induce insulin-secreting β cells. In normal individuals, βα-catenin forms a complex with cadherin, mediates homotypic cell adhesion, and maintains cell stability; simultaneously, α-catenin, as a key member of the Wnt/α-catenin signaling pathway, regulates cell proliferation and apoptosis during the process of mediating signal transduction. In malignant tumors, the expression of α-catenin shows obvious heterogeneity, promotes abnormal cell proliferation, can also reduce adhesion between cells, and enhances invasiveness.

[VALIDATION IMAGES]



Paraformaldehyde-fixed, paraffin embedded (rat brain tissue); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (CTNNA1) Polyclonal Antibody, Unconjugated (SL1594R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

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