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Anti-Catenin, alpha-1 (CTNNA1) Antibody

Mouse Monoclonal Antibody
Catalog # AH13141

Product Information

Application	WB, IF, FC
Primary Accession	P35221
Other Accession	445981
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1
Clone Names	1G5
Calculated MW	100071

Additional Information

Gene ID	1495
Other Names	Alpha E-catenin; Cadherin-associated protein; CAP102; Catenin alpha-1; CTNNA1; Renal carcinoma antigen NY-REN-13
Application Note	Flow Cytometry (0.5-1ug/million cells); ,Immunofluorescence (1-2ug/ml); ,Western Blotting (0.5-1.0ug/ml),Optimal dilution for a specific application should be determined.
Format	200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	Anti-Catenin, alpha-1 (CTNNA1) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CTNNA1 (HGNC:2509)
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 (PubMed:40983751). 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. Involved in the regulation of WWTR1/TAZ, YAP1 and TGFB1-dependent SMAD2 and SMAD3 nuclear accumulation (By similarity). May play a crucial role in cell differentiation.
Cellular Location	Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:P26231}. Cell junction, adherens junction. Cell membrane {ECO:0000250|UniProtKB:P26231}; Peripheral membrane protein; Cytoplasmic side {ECO:0000250|UniProtKB:P26231}. Cell junction Cytoplasm {ECO:0000250|UniProtKB:Q9PVF8}. Nucleus. Note=Found at cell-cell boundaries and probably at cell-matrix boundaries. {ECO:0000250|UniProtKB:P26231}
Tissue Location	[Isoform 1]: Ubiquitously expressed in normal tissues.

Background

Recognizes a protein of 102kDa, identified as Catenin, alpha-1. Catenins comprise a large family of Ca2+-dependent, homotypic cell-cell adhesion molecules that play important roles in development, epithelial cell polarity and tumor progression. Alpha-catenin is a key regulator of actin dynamics in cell-cell adhesion. During cell-cell adhesion, α-catenin forms a heterodimer with β-catenin and links the cadherins to actin associated with the cytoskeleton. Alpha-catenin also regulates the beta-catenin signaling in various cells. It displays the tumor suppressor activity and is found to be down regulated in some forms of breast cancer.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.