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# CTNND2/delta 2 Catenin Rabbit pAb

Catalog # AP99321

## Product Information

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| **Application** | IHC-P, IHC-F, IF |
| **Primary Accession** | Q9UQB3 |
| **Other Accession** | Q9UQB3 |
| **Reactivity** | Rat, Human, Mouse |
| **Predicted** | Pig, Dog, Sheep |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 132656 |
| **Physical State** | Liquid |
| **Immunogen** | KLH conjugated synthetic peptide derived from human CTNND2/delta 2 Catenin |
| **Epitope Specificity** | 111-210/1225 |
| **Isotype** | IgG |
| **Purity** | affinity purified by Protein A |
| **Buffer** | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. |
| **SIMILARITY** | Belongs to the beta-catenin family. Contains 9 ARM repeats. |
| **SUBUNIT** | Binds to E-cadherin at a juxtamembrane site within the cytoplasmic domain. Interacts with PDZD2. Interacts with ZBTB33 (By similarity). Binds to PSEN1. Interacts with ARHGEF28. Interacts (via the extreme C-terminus) with FRMPD2 (via the PDZ 2 domain). |
| **Post-translational modifications** | O-glycosylated. Phosphorylated upon DNA damage, probably by ATM or ATR. |
| **Important Note** | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. |
| **Background Descriptions** | The Alpha-, Beta-, Gamma-, and Delta -catenins are proteins that bind to the highly conserved, intracellular cytoplasmic tail of E-cadherin. Together, the catenin/cadherin complexes play an important role mediating cellular adhesion. Alpha-catenin interacts with E-cadherin associated protein and also associates with other members of the cadherin family, such as N-cadherin and P-cadherin. Beta-catenin associates with the cytoplasmic portion of E-cadherin, which is necessary for the function of E-cadherin as an adhesion molecule. Beta-catenin also complexes with the tumor suppressor protein APC. Gamma-catenin, also known as plakoglobin, is a protein that binds ?catenin and N-cadherin. Gamma-catenin interacts with presenilin 1 and is expressed in the brain. The gene encoding Gamma-catenin maps to human chromosome 5p15.2. A hemizygous loss of the gene encoding Gamma-catenin leads to the mental retardation associated with Cri-du-Chat syndrome. In addition, the transmembrane phosphatase PTPm associates with catenin/ cadherin complexes and may regulate complex signaling. |

## Additional Information

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| **Gene ID** | |
| **Other Names** | GT24; NPRAP; CTND2_HUMAN; CTNND2; Delta-catenin; Neural plakophilin-related ARM-repeat protein (NPRAP); Neurojungin; CTND2_RAT; CTND2_MOUSE; Catnd2; catenin delta 2; catenin (cadherin-associated protein), delta 2 (neural plakophilin-related arm-repeat protein); catenin (cadherin-associated protein), delta 2; neural plakophilin-related arm-repeat protein |
| **Dilution** | IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 |
| **Storage** | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |

## Protein Information

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| **Name** | CTNND2 |
| **Synonyms** | NPRAP |
| **Function** | Has a critical role in neuronal development, particularly in the formation and/or maintenance of dendritic spines and synapses (PubMed:25807484). Involved in the regulation of Wnt signaling (PubMed:25807484). It probably acts on beta-catenin turnover, facilitating beta-catenin interaction with GSK3B, phosphorylation, ubiquitination and degradation (By similarity). Functions as a transcriptional activator when bound to ZBTB33 (By similarity). May be involved in neuronal cell adhesion and tissue morphogenesis and integrity by regulating adhesion molecules. |
| **Cellular Location** | Nucleus {ECO:0000250\|UniProtKB:O35927}. Cell junction, adherens junction {ECO:0000250\|UniProtKB:O35927}. Cell projection, dendrite {ECO:0000250\|UniProtKB:O35116}. Perikaryon |
| **Tissue Location** | Expressed in brain; highest expression is observed in fetal brain (PubMed:25807484). |

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