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Anti-Catenin, delta-1 (CTNND1) (pTyr96) Antibody

Mouse Monoclonal Antibody
Catalog # AH13159

Product Information

Application	IF, FC
Primary Accession	O60716
Other Accession	166011
Reactivity	Human, Rat
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Clone Names	25a
Calculated MW	108170

Additional Information

Gene ID	1500
Other Names	Cadherin-associated Src substrate (CAS); Catenin (cadherin associated protein) delta 1; Catenin delta-1; CTNND1; p120 catenin; P120 CTN; p120(cas); p120(ctn); P120CAS; P120CTN
Application Note	Flow Cytometry (0.5-1ug/million cells); ,Immunofluorescence (1-2ug/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, delta-1 (CTNND1) (pTyr96) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CTNND1 (HGNC:2515)
Synonyms	KIAA0384
Function	Key regulator of cell-cell adhesion that associates with and regulates the cell adhesion properties of both C-, E- and N-cadherins, being critical for their surface stability (PubMed:14610055, PubMed:20371349). Promotes localization and retention of DSG3 at cell- cell junctions, via its interaction with DSG3 (PubMed:18343367). Beside cell-cell adhesion, regulates gene

	transcription through several transcription factors including ZBTB33/Kaiso2 and GLIS2, and the activity of Rho family GTPases and downstream cytoskeletal dynamics (PubMed:10207085, PubMed:20371349). Implicated both in cell transformation by SRC and in ligand-induced receptor signaling through the EGF, PDGF, CSF-1 and ERBB2 receptors (PubMed:17344476).
Cellular Location	Cell junction, adherens junction. Cytoplasm. Nucleus. Cell membrane. Cell junction. Note=Interaction with GLIS2 promotes nuclear translocation (By similarity). Detected at cell-cell contacts (PubMed:15240885, PubMed:17047063). NANOS1 induces its translocation from sites of cell-cell contact to the cytoplasm (PubMed:17047063). CDH1 enhances cell membrane localization (PubMed:15240885). Localizes to cell-cell contacts as keratinocyte differentiation progresses (By similarity) {ECO:0000250|UniProtKB:P30999, ECO:0000269|PubMed:11896187, ECO:0000269|PubMed:15240885, ECO:0000269|PubMed:17047063} [Isoform 2A]: Nucleus [Isoform 4A]: Cytoplasm
Tissue Location	Expressed in vascular endothelium. Melanocytes and melanoma cells primarily express the long isoform 1A, whereas keratinocytes express shorter isoforms, especially 3A. The shortest isoform 4A, is detected in normal keratinocytes and melanocytes, and generally lost from cells derived from squamous cell carcinomas or melanomas. The C-terminal alternatively spliced exon B is present in the p120ctn transcripts in the colon, intestine and prostate, but lost in several tumor tissues derived from these organs

Background

The membrane associated protein pp120 Src substrate (p120 Catenin, p120cas) was identified as a tyrosine kinase substrate that is phosphorylated in Src transformed cells or in response to growth factor stimulation. It shares structural similarity with the Drosophila Armadillo protein and the vertebrate beta-catenin and gamma-catenin proteins. Its characteristic Arm domain that is composed of 42-amino acid motif repeats evidences this similarity. In the cell, p120 Catenin is localized to the E-Cadherin/catenins cell adhesion complex. Like beta- and gamma-catenin, p120 Catenin directly associates with the cytoplasmic C-terminus of E-Cadherin via its Arm domain and may similarly interact with other Cadherins. It exists as four isoforms that range in size from 90-115kDa. Expression of these isoforms is heterogeneous in human carcinomas, suggesting that altered pp120 expression contributes to malignancy due to loss of functional cell adhesions. Multiple tyrosine residues (Y96, Y112, Y228, Y280, Y257, Y291, Y296, and Y302) in p120 Catenin are phosphorylated by Src and these phosphorylations may facilitate interaction with PTP1C/SHP-1 in response to EGF stimulation. Thus, p120 Catenin is an Arm domain protein that interacts with both cell adhesion molecules, such as cadherins and cell signaling molecules, such as PTP1C.