SANTA CRUZ BIOTECHNOLOGY, INC.

δ-catenin (40.1): sc-81793

BACKGROUND

The catenins, α, β and γ, are proteins which bind to the highly conserved, intracellular cytoplasmic tail of E-cadherin. Together, the catenin/cadherin complexes play an important role mediating cellular adhesion. α-catenin was initially described as an E-cadherin associated protein, and since has been shown to associate with other members of the cadherin family, such as N-cadherin and P-cadherin. β-catenin associates with the cytoplasmic portion of E-cadherin, which is necessary for the function of E-cadherin as an adhesion molecule. β-catenin has also been found in complexes with the tumor suppressor protein APC. γ-catenin, also known as plakoglobin, binds with α-catenin and N-cadherin. δ-catenin interacts with presenilin 1 and is expressed in the brain. The gene encoding δ-catenin maps to human chromosome 5p15.2. A hemizygous loss of the gene encoding δ-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.

CHROMOSOMAL LOCATION

Genetic locus: CTNND2 (human) mapping to 5p15.2; Ctnnd2 (mouse) mapping to 15 B2.

SOURCE

δ-catenin (40.1) is a mouse monoclonal antibody raised against a partial recombinant protein mapping within amino acids 1081-1190 of δ-catenin of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

δ-catenin (40.1) is recommended for detection of δ-catenin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for δ-catenin siRNA (h): sc-43021, δ-catenin siRNA (m): sc-43022, δ-catenin shRNA Plasmid (h): sc-43021-SH, δ-catenin shRNA Plasmid (m): sc-43022-SH, δ-catenin shRNA (h) Lentiviral Particles: sc-43021-V and δ-catenin shRNA (m) Lentiviral Particles: sc-43022-V.

Molecular Weight of δ-catenin: 133 kDa.

Positive Controls: PC-12 cell lysate: sc-2250, A-431 whole cell lysate: sc-2201 or C6 whole cell lysate: sc-364373.

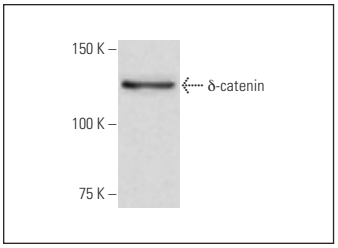
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

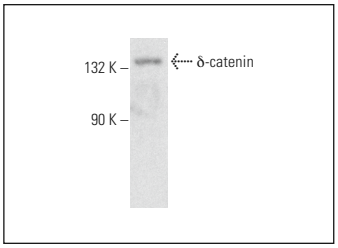
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



δ-catenin (40.1): sc-81793. Western blot analysis of δ-catenin expression in PC-12 whole cell lysate.



δ-catenin (40.1): sc-81793. Western blot analysis of δ-catenin expression in C6 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Dai, S.D., et al. 2011. Upregulation of δ-catenin is associated with poor prognosis and enhances transcriptional activity through Kaiso in non-small-cell lung cancer. Cancer Sci. 102: 95-103.
2. Jun, G., et al. 2012. δ-catenin is genetically and biologically associated with cortical cataract and future Alzheimer-related structural and functional brain changes. PLoS ONE 7: e43728.
3. Zhang, D., et al. 2014. Co-expression of δ-catenin and RhoA is significantly associated with a malignant lung cancer phenotype. Int. J. Clin. Exp. Pathol. 7: 3724-3732.
4. Zhang, D., et al. 2015. δ-catenin promotes the malignant phenotype in breast cancer. Tumour Biol. 36: 569-575.
5. Folmsbee, S.S., et al. 2016. αT-catenin in restricted brain cell types and its potential connection to autism. J. Mol. Psychiatry 4: 2.
6. van Rootselaar, A.F., et al. 2017. δ-catenin (CTNND2) missense mutation in familial cortical myoclonic tremor and epilepsy. Neurology 89: 2341-2350.
7. Xu, T., et al. 2019. MiR-218 regulated cardiomyocyte differentiation and migration in mouse embryonic stem cells by targeting PDGFRα. J. Cell. Biochem. 120: 4355-4365.
8. Ikezu, S., et al. 2021. Inhibition of colony stimulating factor 1 receptor corrects maternal inflammation-induced microglial and synaptic dysfunction and behavioral abnormalities. Mol. Psychiatry 26: 1808-1831.
9. Villar-Conde, S., et al. 2021. The human hippocampus in Parkinson's disease: an integrative stereological and proteomic study. J. Parkinsons Dis. 11: 1345-1365.
10. Hu, Y., et al. 2022. δ-catenin attenuates medulloblastoma cell invasion by targeting EMT pathway. Front. Genet. 13: 867872.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.