

α T-catenin (892_24D2S): sc-59943

BACKGROUND

The catenins (α , β , γ and δ) are ubiquitously expressed, cytoplasmic proteins that associate with E-cadherin at cellular junctions. Catenin/cadherin complexes play an important role in mediating cellular adhesion. α T-catenin, also referred to as VR22, is a 895 amino acid protein that is most abundantly expressed in cardiomyocytes and in the peritubular myoid cells of the testis. α T-catenin binds to α E-catenin as well as to β -catenin, and it functions to inhibit Wnt signaling. CTNNA3, the gene that encodes for α T-catenin, is located on chromosome 10, and mutations in this gene show a strong correlation to late-onset Alzheimer's disease (LOAD) as well as to dilated cardiomyopathy.

REFERENCES

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3. Ertekin-Taner, N., et al. 2003. Fine mapping of the α T-catenin gene to a quantitative trait locus on chromosome 10 in late-onset Alzheimer's disease pedigrees. *Hum. Mol. Genet.* 12: 3133-3143.
4. Janssens, B., et al. 2003. Assessment of the CTNNA3 gene encoding human α T-catenin regarding its involvement in dilated cardiomyopathy. *Hum. Genet.* 112: 227-236.
5. Blomqvist, M.E., et al. 2004. Genetic variation in CTNNA3 encoding α 3-catenin and Alzheimer's disease. *Neurosci. Lett.* 358: 220-222.
6. Busby, V., et al. 2004. α T-catenin is expressed in human brain and interacts with the Wnt signaling pathway but is not responsible for linkage to chromosome 10 in Alzheimer's disease. *Neuromolecular Med.* 5: 133-146.
7. Martin, E.R., et al. 2005. Interaction between the α T-catenin gene (VR22) and APOE in Alzheimer's disease. *J. Med. Genet.* 42: 787-792.
8. Kuwano, R., et al. 2006. Dynamamin-binding protein gene on chromosome 10q is associated with late-onset Alzheimer's disease. *Hum. Mol. Genet.* 15: 2170-2182.
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CHROMOSOMAL LOCATION

Genetic locus: CTNNA3 (human) mapping to 10q21.3; Ctnna3 (mouse) mapping to 10 B4.

SOURCE

α T-catenin (892_24D2S) is a mouse monoclonal antibody raised against amino acids 164-177 of α T-catenin of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

α T-catenin (892_24D2S) is recommended for detection of α T-catenin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); non cross-reactive with α E-catenin or α N-catenin.

Suitable for use as control antibody for α T-catenin siRNA (h): sc-61904, α T-catenin siRNA (m): sc-61905, α T-catenin shRNA Plasmid (h): sc-61904-SH, α T-catenin shRNA Plasmid (m): sc-61905-SH, α T-catenin shRNA (h) Lentiviral Particles: sc-61904-V and α T-catenin shRNA (m) Lentiviral Particles: sc-61905-V.

Molecular Weight of α T-catenin: 100 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or HCT-8 cell lysate: sc-24675.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

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.

PROTOCOLS

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