

# α N-catenin (I-17): sc-31007

## BACKGROUND

α-catenins are a group of proteins associated with cadherin cell-cell adhesion molecules and play indispensable roles in the function of the cadherins. α N-catenin is a linker between cadherin adhesion receptors and the Actin cytoskeleton and is essential for stabilizing dendritic spines in rodent hippocampal neurons in culture. A deletion in this protein causes cerebellar and hippocampal lamination defects and impaired startle reaction. α E and α N-catenin appear to co-localize in cell bodies of neurons in dorsal root ganglia. In mice, α N-catenin was found to occur at the roof plate of the mesencephalon and diencephalon, coinciding with Wnt-1 expression.

## REFERENCES

1. Shimamura, K., et al. 1994. Wnt-1-dependent regulation of local E-cadherin and α N-catenin expression in the embryonic mouse brain. *Development* 120: 2225-2234.
2. Hirano, S., et al. 1994. Differential expression of α N-catenin and N-cadherin during early development of chicken embryos. *Int. J. Dev. Biol.* 38: 379-384.
3. Uchida, N., et al. 1994. Mouse α N-catenin: two isoforms, specific expression in the nervous system and chromosomal localization of the gene. *Dev. Biol.* 163: 75-85.
4. Shibuya, Y., et al. 1996. α N-catenin expression in the normal and regenerating chick sciatic nerve. *J. Neurocytol.* 25: 615-624.
5. Seto, A., et al. 1997. Alteration of E-cadherin and α N-catenin immunoreactivity in the mouse spinal cord following peripheral axotomy. *J. Neuropathol. Exp. Neurol.* 56: 1182-1190.
6. Park, C., et al. 2002. Deletion in *Catna 2*, encoding α N-catenin, causes cerebellar and hippocampal lamination defects and impaired startle modulation. *Nat. Genet.* 31: 279-284.
7. Shibuya, Y., et al. 2003. α E and α N-catenin expression in dorsal root ganglia and spinal cord. *Kobe J Med Sci* 49: 93-98.
8. Abe, K., et al. 2004. Stability of dendritic spines and synaptic contacts is controlled by α N-catenin. *Nat. Neurosci.* 7: 357-363.

## CHROMOSOMAL LOCATION

Genetic locus: CTNNA2 (human) mapping to 2p12; *Ctnna2* (mouse) mapping to 6 C3.

## SOURCE

α N-catenin (I-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of α N-catenin of human origin.

## PRODUCT

Each vial contains 200 μg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-31007 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

α N-catenin (I-17) is recommended for detection of α N-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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

α N-catenin (I-17) is also recommended for detection of α N-catenin in additional species, including equine, canine and porcine.

Suitable for use as control antibody for α N-catenin siRNA (h): sc-43019, α N-catenin siRNA (m): sc-43508, α N-catenin shRNA Plasmid (h): sc-43019-SH, α N-catenin shRNA Plasmid (m): sc-43508-SH, α N-catenin shRNA (h) Lentiviral Particles: sc-43019-V and α N-catenin shRNA (m) Lentiviral Particles: sc-43508-V.

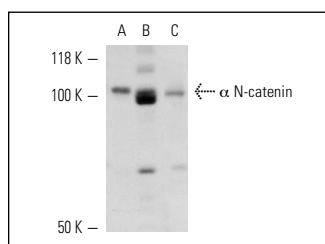
Molecular Weight of α N-catenin: 102 kDa.

Positive Controls: T98G cell lysate: sc-2294 or EOC 20 whole cell lysate: sc-364187.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



α N-catenin (I-17): sc-31007. Western blot analysis of α N-catenin expression in T98G (A) and EOC 20 (B) whole cell lysates and mouse postnatal brain tissue extract (C).

## 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.