

a N-Catenin

Rudolf-Wissell-Str. 28 37079 Göttingen, Germany

Phone: +49 551-50556-0
Fax: +49 551-50556-384
E-mail: sales@sysy.com
Web: www.sysy.com

Cat.No. 281 103; Polyclonal rabbit antibody, 50 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	50 μg specific antibody, lyophilized. Affinity purified with the immunogen. Rabbit serum albumin was added for stabilization. For reconstitution add 50 μ l H ₂ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	WB: 1: 1000 (AP staining) IP: not tested yet ICC: 1: 1000 IHC: 1: 500 IHC-P/FFPE: not tested yet
Immunogen	Synthetic peptide corresponding to AA 921 to 939 from mouse a N-catenin (UniProt Id: Q61301)
Reactivity	Reacts with: human (P26232), rat, mouse (Q61301). Other species not tested yet.
Specificity	Recognizes all isoforms of α-N-catenin. The antibody may cross-react to α-E-catenin due to 53 % sequence identity of the corresponding peptide sequences.

TO BE USED IN VITRO / FOR RESEARCH ONLY NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

 α , β and γ -catenin are intracellular proteins that link cadherins to the actin cytosceleton. Cadherins are cell-surface proteins that are involved in cell-cell adhesion.

a-N-catenin is expressed mainly in the nervous system. It is a cytoplasmic protein that interacts with N-cadherin and functions in cell-cell adhesion. It is a regulator for the stability of synaptic contacts and is important for cerebellar and hippocampal lamination. There are two isoforms which are differentially expressed during development.

The major part of β -catenin localizes to the cell membrane and is part of E-cadherin/catenin adhesion complexes.

Selected General References

Axonal translation of β -catenin regulates synaptic vesicle dynamics.

Taylor AM, Wu J, Tai HC, Schuman EM

The Journal of neuroscience: the official journal of the Society for Neuroscience (2013) 33(13): 5584-9.

β-Catenin gain of function in muscles impairs neuromuscular junction formation.

Wu H, Lu Y, Barik A, Joseph A, Taketo MM, Xiong WC, Mei L Development (Cambridge, England) (2012) 139(13): 2392-404.

Regulation of classical cadherin membrane expression and F-actin assembly by alpha-catenins, during Xenopus embryogenesis.

Nandadasa S. Tao O. Shoemaker A. Cha SW. Wylie C

PloS one (2012) 7(6): e38756.

A role for primary cilia in glutamatergic synaptic integration of adult-born neurons.

Kumamoto N. Gu Y. Wang J. Janoschka S. Takemaru K. Levine J. Ge S

Nature neuroscience (2012) 15(3): 399-405. S1.

Stability of dendritic spines and synaptic contacts is controlled by alpha N-catenin.

Abe K, Chisaka O, Van Roy F, Takeichi M Nature neuroscience (2004) 7(4): 357-63.

deale fied oscience (2004) 7(4). 337 03.

Deletion in Catna2, encoding alpha N-catenin, causes cerebellar and hippocampal lamination defects and impaired startle modulation.

Park C, Falls W, Finger JH, Longo-Guess CM, Ackerman SL

Nature genetics (2002) 31(3): 279-84.

N-cadherin redistribution during synaptogenesis in hippocampal neurons.

Benson DL. Tanaka H

The Journal of neuroscience: the official journal of the Society for Neuroscience (1998) 18(17): 6892-904.

Alpha N-catenin expression in the normal and regenerating chick sciatic nerve.

Shibuya Y, Yasuda H, Tomatsuri M, Mizoguchi A, Takeichi M, Shimada K, Ide C

Journal of neurocytology (1996) 25(11): 615-24.

Interaction of alpha-actinin with the cadherin/catenin cell-cell adhesion complex via alpha-catenin.

Knudsen KA, Soler AP, Johnson KR, Wheelock MJ

The Journal of cell biology (1995) 130(1): 67-77.

Wnt-1 modulates cell-cell adhesion in mammalian cells by stabilizing beta-catenin binding to the cell adhesion protein cadherin. Hinck L. Nelson WJ. Papkoff J

The Journal of cell biology (1994) 124(5): 729-41.

Mouse alpha N-catenin: two isoforms, specific expression in the nervous system, and chromosomal localization of the gene.

Uchida N, Shimamura K, Miyatani S, Copeland NG, Gilbert DJ, Jenkins NA, Takeichi M

Developmental biology (1994) 163(1): 75-85.

The vertebrate adhesive junction proteins beta-catenin and plakoglobin and the Drosophila segment polarity gene armadillo form a multigene family with similar properties.

Peifer M, McCrea PD, Green KJ, Wieschaus E, Gumbiner BM

The Journal of cell biology (1992) 118(3): 681-91.

Identification of a neural alpha-catenin as a key regulator of cadherin function and multicellular organization.

Hirano S, Kimoto N, Shimoyama Y, Hirohashi S, Takeichi M

Cell (1992) 70(2): 293-301.

Transmembrane control of cadherin-mediated cell adhesion: a 94 kDa protein functionally associated with a specific region of the cytoplasmic domain of E-cadherin.

Nagafuchi A. Takeichi M

Cell regulation (1989) 1(1): 37-44.