

#2131 Store at -20C

α -N-Catenin Antibody

**Cell Signaling**
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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IP, IF-IC, FC-FP	H M R	Endogenous	102	Rabbit	#P26232	1496

Product Usage Information

Application

Western Blotting
Immunoprecipitation
Immunofluorescence (Immunocytochemistry)
Flow Cytometry (Fixed/Permeabilized)

Dilution

1:1000
1:100
1:800
1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

α -N-Catenin Antibody detects endogenous levels of α -N-catenin protein. The antibody does not cross-react with other α -catenin family members.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding the carboxy-terminus of human α -N-catenin. Antibodies are purified using protein A and peptide affinity chromatography.

Background

Adherens junctions are dynamic structures that form cell-cell contacts and are important in development, differentiation, tissue integrity, morphology and cell polarity. They are composed of the transmembrane proteins, cadherins, which bind cadherins on adjacent cells in a calcium-dependent manner. On the cytoplasmic side of adherens junctions, the classic model states that cadherins are linked to the cytoskeleton through β - and α -catenin. α -E-catenin is ubiquitously expressed, α -N-catenin is expressed in neuronal tissue, and α -T-catenin is primarily expressed in heart tissue. Research studies have demonstrated that loss of E-cadherin and α -E-catenin occurs during the progression of several human cancers, indicating that the breakdown of adherens junctions is important in cancer progression (reviewed in 1). Research studies also suggest that, rather than acting as a static link between cadherins and actin, α -catenin regulates actin dynamics directly, possibly by competing with the actin nucleating arp2/3 complex (2,3). α -catenin also plays a role in regulating β -catenin-dependent transcriptional activity, affecting differentiation and response to Wnt signaling. α -catenin binds to β -catenin in the nucleus, preventing it from regulating transcription, and levels of both proteins appear to be regulated via proteasome-dependent degradation (4).

Background References

1. Kobiela, A. and Fuchs, E. (2004) *Nat Rev Mol Cell Biol* 5, 614-25.
2. Yamada, S. et al. (2005) *Cell* 123, 889-901.
3. Drees, F. et al. (2005) *Cell* 123, 903-15.
4. Hwang, S.G. et al. (2005) *J Biol Chem* 280, 12758-65.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)
FC-FP: Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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