Revision 1

#36611 Store at -20C

# α-E-Catenin (D9R5E) Rabbit mAb

Cell Signaling TECHNOLOGY®

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| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|---|---|---|---|---|---|---|
| WB, IF-IC | H M R | Endogenous | 100 | Rabbit IgG | #P35221 | 1495 |

## Product Usage Information

| Application | Dilution |
|---|---|
| Western Blotting | 1:1000 |
| Immunofluorescence (Immunocytochemistry) | 1:800 |

## Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

## Specificity / Sensitivity

α-E-Catenin (D9R5E) Rabbit mAb recognizes endogenous levels of total α-E-catenin protein.

## Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala885 of human α-E-Catenin protein.

## 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. Kobielak, 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 **IF-IC:** Immunofluorescence (Immunocytochemistry)

## 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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