

#3240 Store at -20°C

# α-E-Catenin (23B2) Rabbit mAb

✓ 100 μl (10 western blots)



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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP Endogenous	H, M, Mk	100 kDa	Rabbit IgG**

**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 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. 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).

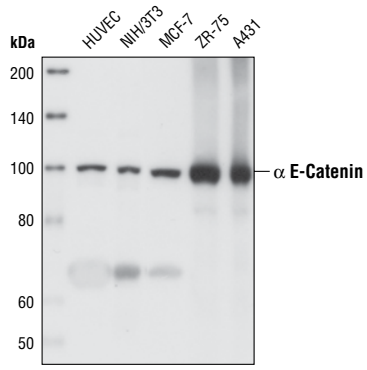
Recent evidence suggests that, rather than acting as a static link between cadherins and actin, α-catenin regulates actin dynamics directly, possibly by competing with the actin nucleating arp2/3 complex (2,3). α-catenin also plays a role in regulating β-catenin-dependent transcriptional activity, affecting 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).

**Specificity/Sensitivity:** α-E-Catenin (23B2) Rabbit mAb detects endogenous levels of total α-E catenin protein. The antibody may cross-react with neuronal α-N-catenin.

**Source/Purification:** Monoclonal antibody is produced by immunizing rabbits with a synthetic peptide (KLH-coupled) corresponding to the amino-terminal sequence of human α-E-catenin.

### Background References:

- (1) Kobiela, A. and Fuchs, E. (2004) *Nat. Rev. Mol. Cell Biol.* 5, 614–625.
- (2) Yamada, S. et al. (2005) *Cell* 123, 889–901.
- (3) Drees, F. et al. (2005) *Cell* 123, 903–915.
- (4) Hwang, S.G. et al. (2005) *J. Biol. Chem.* 280, 12758–12765.



Western blot analysis of extracts from HUVEC, NIH/3T3, MCF-7, ZR-75 and A431 cells using α-E-Catenin (23B2) Rabbit mAb.

Entrez-Gene ID #1495  
Swiss-Prot Acc. #P35221

**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.

\*Species cross-reactivity is determined by western blot.

\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

### Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:50

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.

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

**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.

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