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ProductInformation

Anti-α-E-Catenin
Developed in Rabbit
IgG Fraction of Antiserum

Product Number **C 8114**

Product Description

Anti-α-E-Catenin is developed in rabbit using as immunogen a synthetic peptide corresponding to a region near the C-terminus of human α-E-catenin (amino acids 873-887), conjugated to KLH. This sequence is identical in mouse and *Xenopus* α-E-catenin. It is not found in α-N-catenin, β-catenin, and γ-catenin. Whole antiserum is fractionated and then further purified by ion-exchange chromatography to provide the IgG fraction of antiserum that is essentially free of other rabbit serum proteins.

Anti-α-E-Catenin recognizes α-E-catenin (102 kDa). Applications include the detection of α-E-catenin by immunoblotting and immunocytochemistry. Staining of the α-E-catenin band in immunoblotting is specifically inhibited with the α-E-catenin immunizing peptide (human, amino acids 873-887).

The catenins (α-, β-, and γ-) are cytoplasmic proteins found in varying abundance in many developing and adult tissues.[1, 2] Catenins bind directly or indirectly to the conserved cytoplasmic tail domain of the cell adhesion cadherins. The association of catenins to cadherins produces a complex, which is linked to the actin filament network.[3] Catenins/cadherin complexes play an important role in mediating cell adhesion, transduction of cell-cell contact positional signals to the cell interior, and may play a crucial role in cell differentiation.[4] The linkage of the epithelial E-cadherin/uvomorulin to actin is essential for the cell binding function of this cadherin. α-Catenin (CAP102, 102 kDa), originally described as an E-cadherin associated protein, has been shown to associate with other members of the cadherin family members, N-cadherin and P-cadherin. Within its conserved region α-catenin shows 30% identity to vinculin.[5, 6]

There are at least two subtypes of α-catenin: α-E-catenin and α-N-catenin (102 kDa).[7, 8] The predominant form is α-E-catenin. It is ubiquitously expressed and present at low levels in the nervous system. Alternative spliced forms of α-E-catenin include α1- and α2-E-catenin.[7, 9] The expression of α-N-catenin is more restricted and this form predominates in the brain. α-E-Catenin is absent in certain tumor cell lines and thus has been thought to act as an invasion suppressor gene.[10] α-Catenin levels are frequently reduced in human carcinomas of the esophagus, stomach, and colon.[11] Deletions in the α-catenin gene appear to be strongly correlated to prostate cancer development. Conditional ablation of α-catenin in skin results in epidermis hyperproliferation and defects in epithelial polarity and adherens junction formation.[12]

Reagent

Anti-α-E-Catenin is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For prolonged storage, freeze in working aliquots at –20 °C. Repeated freezing and thawing is not recommended. Storage in frost-free freezers is also not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

For immunoblotting, a minimum working antibody dilution of 1:1,000 is recommended using a whole cell extract of human epidermal carcinoma A431 cell line and a cytosolic fraction S1 of rat embryonic brain.

By immunocytochemistry, a minimum working antibody dilution of 1:100 is recommended using methanol-fixed MDCK or MCF cell line.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilution by titration.

References

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