

Product Information

Anti-APC (C-terminal)

produced in rabbit, affinity isolated antibody

Product Number **SAB4200594**

Product Description

Anti-APC (C-terminal) is produced in rabbit using as immunogen a synthetic peptide corresponding to a sequence at the C-terminal region of human APC (GeneID: 324), conjugated to KLH. The corresponding sequence is identical in human APC isoform b and highly conserved (single amino acid substitution) in rat and mouse APC. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-APC (C-terminal) specifically recognizes human APC. The antibody may be used in several immunochemical techniques including immunoblotting (~300 kDa), immunofluorescence and immunohistochemistry. Detection of the APC band by immunoblotting is specifically inhibited by the APC immunizing peptide.

Adenomatous Polyposis Coli (APC) is a tumor suppressor gene that is mutated in the vast majority of familial and sporadic colorectal carcinomas. The APC gene encodes a large multifunctional protein that has critical functions in cell migration, adhesion and proliferation.¹⁻⁴ APC is a shuttling nucleo-cytoplasmic protein expressed in various tissues and its expression in the colorectal epithelium contributes to its normal growth and differentiation.⁵ The majority of APC cancer mutations target a centrally-located ~300 amino acid sequence known as the mutation cluster region (MCR), resulting in the generation of truncated APC proteins with altered functions. APC has a key role in the proteasome-mediated degradation of β -catenin. APC mutations cause accumulation of β -catenin in the nucleus leading to activation of LEF-1 and/or TCF, and the induction of target genes such as the oncogene c-myc.⁵ APC has been implicated in a range of additional cellular functions that are consistent with its role as a tumor suppressor. These correlate with the many distinct subcellular localizations of APC that include the nucleus, mitochondria, mitotic spindle and plasma membrane.^{2,3} APC is also involved in regulation of mitotic chromosome separation and stability, a function that is altered by APC truncating mutations in cancer.

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: ~1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is 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

Immunoblotting: a working concentration of 3-6 μ g/mL is recommended using lysates of HeLa or SW620 cells.

Immunofluorescence: a working concentration of 2-4 μ g/mL is recommended using Caco-2 cells.

Immunohistochemistry: a working concentration of 10-20 μ g/mL is recommended using formalin-fixed, paraffin-embedded human colon or duodenum.

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

References

1. Fodde, R., *Nat. Rev. Cancer*, **1**, 55-67 (2001).
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3. Neufeld, K.L., *Adv. Exp. Med. Biol.*, **656**, 13-29 (2009).
4. Aoki, K., and Taketo, M.M., *J. Cell Sci.*, **120**, 3327-3335 (2007).
5. Senda, T., et al., *Med. Mol. Morphol.*, **40**, 68-81 (2007).

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