

Background

The microtubule (MT) plus-end is a crucial site for the regulation of MT dynamics and MT association with organelles by several groups of plus-end tracking proteins (+TIPs). These +TIPs form comet-like accumulations at the plus ends of MTs to regulate MT dynamics and interactions. The +TIPs include diverse groups of proteins, such as motor and nonmotor proteins, MT polymerases and depolymerases as well as various regulatory and adaptor proteins. One group of +TIPs include proteins with basic and serine-rich motifs (SxIP motifs) that mediate interaction between MTs and EB proteins. Adenomatous polyposis coli (APC), MACF, and STM1 are a group of the SxIP motif-containing proteins. APC protein is a large multidomain tumor suppressor protein that has important roles in Wnt signaling, as well as several other cell functions including cell migration, spindle assembly, chromosome segregation, neuronal differentiation, apoptosis, and MT stabilization. APC interaction with EB proteins through its SxIP motif promotes interaction with MTs leading to stabilization and increased polymerization.

Buffer and Storage

Rat monoclonal antibody purified with protein G chromatography is supplied in 100µl phosphate-buffered saline and 0.05% sodium azide. Aliquot and Store at –20°C. Stable for 1 year.

Specificity

This antibody detects full length APC at 300 kDa* and proteolytic fragments of APC at lower molecular weights. The antibody detects APC or its fragments in SW480, CaCO2, DLD-1, and Hct116 cells. In immunocytochemistry, the antibody detects in APC in clusters at the plasma membrane and at the ends of microtubules.

References

- Gouveia, S.M. & Akhmanova, A. (2010) *Int Rev Cell Mol Biol*. 285:1-74.
Lui, C. et al. (2012) *IUBMB Life*. 64(3):209.
Hendriksen, J. et al. (2008) *J Cell Sci*. 121:1793.

Applications

WB	1:250
ELISA	1:1000
ICC	1:50

End user should determine optimal dilution for their particular applications and experiments. Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1 hour at room temperature.

Immunogen

Clone KT44 was generated from a recombinant protein containing amino acid residues 788 to 1038 from mouse APC. This sequence is highly conserved in human and rat APC, and has low homology to APC2.

Related Products

AM5001	APC (C-terminal region) Rat Monoclonal
CK6120	β-Catenin Phospho-Regulation Antibody Sampler Kit
EM5041	EB1 (C-terminal region) Rat Monoclonal
EM5061	EB1/EB2/EB3 (C-terminal region) Rat Monoclonal
EM5081	EB2 Rat Monoclonal
EM5091	EB3 Rat Monoclonal

Product References

- Hendriksen, J. et al. (2008) *J Cell Sci*. 121:1793.
WB, ICC: SW480, MDCK, Hct116

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