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Product Information

Anti-EB3 (C-terminal)
produced in rabbit, IgG fraction of antiserum

Catalog Number **SAB4200605**

Product Description

Anti-EB3 is produced in rabbit using as immunogen a synthetic peptide corresponding to a sequence at the C-terminus of human EB3 (GeneID: 22924), conjugated to KLH. The corresponding sequence is identical in rat and mouse EB3. Whole antiserum is purified using protein A immobilized on agarose to provide the IgG fraction of antiserum.

Anti-EB3 specifically recognizes human, rat and mouse EB3. The antibody may be used in several immunochemical techniques including immunoblotting (~32 kDa), immunofluorescence and immunohistochemistry. Detection of the EB3 band by immunoblotting is specifically inhibited by the EB3 immunizing peptide.

EB3 (End-Binding protein-3, also known as Microtubule-Associated Protein RP/EB family member 3, MAPRE3) belongs to a distinct family of "plus-end tracking proteins" (+TIPs), that bind to the plus-ends of microtubules and play an important role in regulating dynamics and organization of microtubules (MTs). In humans, EB1 family proteins consist of EB1, EB2 (RP1) and EB3. EB proteins are among the most conserved components of the MT cytoskeleton.[1] EB proteins contain an N-terminal calponin homology (CH) domain and a unique EB-like C-terminal motif. EB3 is preferentially expressed in the central nervous system, and binds to a CNS-specific APC homolog APCL.[2,3] EB3 is specifically expressed during myogenic differentiation and regulates MTs dynamics at the cell cortex. Knockout of EB3 inhibits myoblasts elongation and fusion into myotubes.[4] In neurons, EB3 has been shown to interact with scaffold protein ankyrin-G and PSD95, and is required for stabilizing neuronal polarity in mature neurons and in determining neuronal dendritic morphology.[5,6] EB3 is also involved in MT polymerization and cell migration. EB3 may be involved in stabilizing MTs and anchoring them to centrosomes during spindle formation.[7]

Reagent

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

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 dilution of 1:2,500-1:5,000 is recommended using lysates of mouse brain (S1 fraction).

Immunofluorescence: a working dilution of 1:50-1:100 is recommended using MCF7 cells.

Immunohistochemistry: a working dilution of 1:50-1:100 is recommended using formalin-fixed and paraffin-embedded rat brain.

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

References

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3. Stepanova, T., et al., *J. Neurosci.,* **23**, 2655-2664 (2003).
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6. Sweet, E.C., et al., *J. Neurosci.,* **31**, 1038-1047 (2011).
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