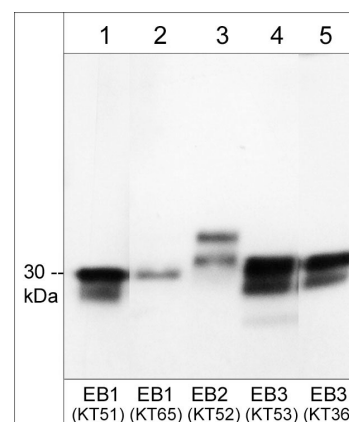


Background

Microtubules (MTs) are oriented with a fast growing plus-end and a slower growing minus-end. The MT plus-end is a crucial site for the regulation of MT dynamics and MT association with different cellular 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. The End-Binding (EB) family of +TIPs includes EB1 (MAPRE1), EB2 (MAPRE2, RP1), and EB3 (MAPRE3, EBF3). EB proteins are ubiquitously expressed +TIPs that can dimerize through a coiled-coil C-terminal region, and bind MTs through an N-terminal calponin homology domain. EB proteins can stabilize MTs, increase MT dynamics, and suppress MT pauses. These activities of EB proteins are important for mitotic spindle formation and chromosome alignment during mitosis, and may have important roles in the centrosome and cilia assembly.

Background References

Komarova, Y. et al. (2005) Mol Biol Cell. 16(11):5334.
Gouveia, S.M. & Akhmanova, A. (2010) Int Rev Cell Mol Biol. 285:1-74.



Western blot of EB proteins in mouse brain (lanes 1-5). The blot was probed with rat monoclonals EM5041 anti-EB1 (lane 1), EM5061 anti-EB1/2/3 (lane 2), EM5081 anti-EB2 (lane 3), EM5101 anti-EB3 (lane 4), and EM5091 anti-EB3 (lane 5). Then the antibodies were detected using goat anti-Rat IgG Light Chain specific: HRP (RS3121).

Applications

WB	1:500
ELISA	1:1000
ICC	1:50

Species Reactivity

Hu, Rt, Ms

Specificity

The antibody detects a 30 kDa* protein corresponding to the molecular mass of EB1 on SDS-PAGE immunoblots of human HeLa, mouse brain, and rat PC12 cells. The antibody also detects EB1 by immunocytochemistry in HeLa and A431 cells. The antibody may weakly detect endogenous EB2 and EB3 in some cells and tissues.

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.

*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

Immunogen

Uniprot ID: Q61166

Clone KT65 was generated from a GST fusion protein containing mouse EB1. This sequence is highly conserved in human and rat EB1.

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.

Related Products

AM5021	APC (Central region) Rat Monoclonal
EM5041	EB1 (C-terminal region) Rat Monoclonal
EK6680	EB1/2/3 Antibody Sampler Kit
EM5081	EB2 Rat Monoclonal
EM5101	EB3 Rat Monoclonal

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