

## Rat EB1 Monoclonal Antibody | anti-EB1 antibody

EB1 (C-terminal region) Antibody

|                              |                    |                                        |                                                                 |
|------------------------------|--------------------|----------------------------------------|-----------------------------------------------------------------|
| CATALOG #<br><b>AAA71627</b> | HOST<br><b>Rat</b> | REACTIVITY<br><b>Human, Rat, Mouse</b> | APPLICATIONS<br><b>Immunocytochemistry, ELISA, Western Blot</b> |
|------------------------------|--------------------|----------------------------------------|-----------------------------------------------------------------|

### PRODUCT SYNONYMS

EB1; Monoclonal Antibody; EB1 (C-terminal region) Antibody; EB1 (C-terminal region); anti-EB1 antibody

### PRODUCT SPECIFICATIONS

|                                               |                                                                                                                                                                                                                                       |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                                          | Rat                                                                                                                                                                                                                                   |
| Reactivity                                    | Human, Rat, Mouse                                                                                                                                                                                                                     |
| Clonality                                     | Monoclonal                                                                                                                                                                                                                            |
| Isotype                                       | IgG2a                                                                                                                                                                                                                                 |
| Clone Number                                  | KT51                                                                                                                                                                                                                                  |
| Specificity                                   | The antibody detects a 30kDa* 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. |
| Purity/Purification                           | Protein G chromatography                                                                                                                                                                                                              |
| Form/Format                                   | Rat monoclonal antibody purified with protein G chromatography is supplied in 100ul phosphate-buffered saline and 0.05% sodium azide.                                                                                                 |
| Applicable Applications for anti-EB1 antibody | ICC (Immunocytochemistry), ELISA, WB (Western Blot)                                                                                                                                                                                   |
| Immunogen                                     | Clone KT51 was generated from a GST fusion protein containing amino acids 125-268 from mouse EB1. This sequence is highly conserved in human and rat EB1.                                                                             |
| Preparation and Storage                       | Aliquot and store at -20 degree C. Stable for 1 year.                                                                                                                                                                                 |

### IMAGES



#### ICC (Immunocytochemistry)

Immunocytochemical labeling of EB1 in paraformaldehyde-fixed and NP40-permeabilized A431 cells. The cells were dual labeled with mouse monoclonal anti-alpha-Tubulin (TM4111) (left) and rat monoclonal anti-EB1 (EM5041) (middle). The antibodies were detected using either goat anti-mouse:DyLight 488 (MS3011) or goat anti-Rat:DyLight 594 (RS3111).



#### WB (Western Blot)

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).

ADDITIONAL INFORMATION

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|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for anti-EB1 antibody | 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 formatin and chromsome alignment during mitosis, and may have important roles in the centrosome and cilia assembly. |
| References                                        | Gouveia, S.M. & Akhmanova, A. (2010) Int Rev Cell Mol Biol. 285:1-74.<br>Morrison, E.E. (2009) Adv Exp Med Biol. 656:41-50.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

NCBI AND UNIPROT INFORMATION

|                                  |                                                                                                                                                       |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| NCBI GI #                        | 7106301                                                                                                                                               |
| NCBI GeneID                      | 13589                                                                                                                                                 |
| NCBI Accession #                 | NP_031922.1                                                                                                                                           |
| NCBI GenBank Nucleotide #        | NM_007896.3                                                                                                                                           |
| UniProt Accession #              | Q61166; Q7TN34                                                                                                                                        |
| Molecular Weight                 | 30,016 Da                                                                                                                                             |
| NCBI Official Full Name          | microtubule-associated protein RP/EB family member 1                                                                                                  |
| NCBI Official Synonym Full Names | microtubule-associated protein, RP/EB family, member 1                                                                                                |
| NCBI Official Symbol             | Mapre1                                                                                                                                                |
| NCBI Official Synonym Symbols    | Eb1; BIM1p; AI462499; AI504412; AW260097; D2Ert459e; 5530600P05Rik                                                                                    |
| NCBI Protein Information         | microtubule-associated protein RP/EB family member 1; end-binding protein 1; APC-binding protein EB1; adenomatosis polyposis coli binding protein Eb1 |
| UniProt Protein Name             | Microtubule-associated protein RP/EB family member 1                                                                                                  |
| UniProt Gene Name                | Mapre1                                                                                                                                                |
| UniProt Synonym Gene Names       | EB1                                                                                                                                                   |
| UniProt Entry Name               | MARE1_MOUSE                                                                                                                                           |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.