



## RHEB Polyclonal Antibody

|                         |        |                      |                    |
|-------------------------|--------|----------------------|--------------------|
| <b>Catalog No</b>       | E91165 | <b>Lot Number</b>    | P00009             |
| <b>Applications</b>     | WB IHC | <b>Quantity</b>      | 100ul, 100ug/100ul |
| <b>Cross-Reactivity</b> | H M R  | <b>Calculated MW</b> | 20kDa              |

### Immunogen Information

|                   |                                   |
|-------------------|-----------------------------------|
| <b>Immunogen</b>  | Recombinant protein of human RHEB |
| <b>Gene ID</b>    | 6009                              |
| <b>Swiss Prot</b> | Q15382                            |
| <b>Synonyms</b>   | RHEB;MGC111559;RHEB2 ;            |

### Product information

|                |                                                                                                                   |
|----------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Species</b> | Rabbit                                                                                                            |
| <b>Isotype</b> | IgG                                                                                                               |
| <b>Purity</b>  | Affinity purification                                                                                             |
| <b>Storage</b> | Store at -20°C or -80°C. Avoid freeze / thaw cycles.<br>Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3. |

### Background

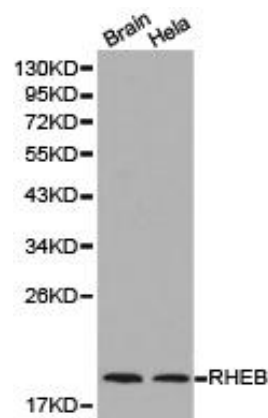
Rheb (Ras Homolog Enriched in Brain) is an evolutionarily conserved member of the Ras family of small GTP-binding proteins originally found to be rapidly induced by synaptic activity in the hippocampus following seizure (1). While it is expressed at relatively high levels in the brain, Rheb is widely expressed in other tissues and may be induced by growth factor stimulation. Like other family members, Rheb triggers activation of the Raf-MEK-MAPK pathway (2). Biochemical and genetic studies demonstrate that Rheb has an important role in regulating the insulin/TOR signaling pathway (3-6). The mammalian target of rapamycin, mTOR, is a serine/threonine protein kinase that acts as a sensor for ATP and amino acids, balancing the availability of nutrients with translation and cell growth. The tuberlin/hamartin (TSC2/TSC1) complex inhibits mTOR activity indirectly by inhibiting Rheb via tuberlin's GAP activity (7).

### References

1. Yamagata, K. et al. (1994) J. Biol. Chem. 269, 16333-16339.
2. Yee, W.M. and Worley, P.F. (1997) Mol. Cell. Biol. 17, 921-933.
3. Inoki, . et al. (2003) Genes Dev. 17, 1829-1834.
4. Stocker, H. et al. (2003) Nature Cell Biol. 5, 559-565.
5. Saucedo, L. J. et al. (2003) Nat. Cell Biol. 5, 566-571.
6. Zhang, Y. et al. (2003) Nat. Cell Biol. 5, 578-581.
7. Li, Y. et al. (2004) Trends Biochem. Sci. 1, 32-38.

### Recommended Dilutions

|     |                |
|-----|----------------|
| WB  | 1:500 - 1:2000 |
| IHC | 1:50- 1:200    |



Western blot analysis of brain cell and Hela cell lysate using RHEB antibody.