

**RHEB Antibody**  
**Rabbit Polyclonal Antibody**  
**Catalog # ALS11434****Specification**

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**RHEB Antibody - Product Information**

|                   |                        |
|-------------------|------------------------|
| Application       | IF, IHC                |
| Primary Accession | <a href="#">Q15382</a> |
| Reactivity        | Human, Mouse, Rat      |
| Host              | Rabbit                 |
| Clonality         | Polyclonal             |
| Calculated MW     | 20kDa kDa              |

**RHEB Antibody - Additional Information****Gene ID** 6009**Other Names**

GTP-binding protein Rheb, Ras homolog enriched in brain, RHEB, RHEB2

**Target/Specificity**

15 amino acid peptide from the middle region of human Rheb

**Reconstitution & Storage**

Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles. Store undiluted.

**Precautions**

RHEB Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**RHEB Antibody - Protein Information****Name** RHEB {ECO:0000303|PubMed:8543055, ECO:0000312|HGNC:HGNC:10011}**Function**

Small GTPase that acts as an allosteric activator of the canonical mTORC1 complex, an evolutionarily conserved central nutrient sensor that stimulates anabolic reactions and macromolecule biosynthesis to promote cellular biomass generation and growth (PubMed:<a href="http://www.uniprot.org/citations/12172553" target="\_blank">12172553</a>, PubMed:<a href="http://www.uniprot.org/citations/12906785" target="\_blank">12906785</a>, PubMed:<a href="http://www.uniprot.org/citations/12271141" target="\_blank">12271141</a>, PubMed:<a href="http://www.uniprot.org/citations/12842888" target="\_blank">12842888</a>, PubMed:<a href="http://www.uniprot.org/citations/12869586" target="\_blank">12869586</a>, PubMed:<a href="http://www.uniprot.org/citations/15340059" target="\_blank">15340059</a>, PubMed:<a href="http://www.uniprot.org/citations/15854902" target="\_blank">15854902</a>, PubMed:<a href="http://www.uniprot.org/citations/16098514" target="\_blank">16098514</a>, PubMed:<a href="http://www.uniprot.org/citations/20381137" target="\_blank">20381137</a>, PubMed:<a href="http://www.uniprot.org/citations/24529379" target="\_blank">24529379</a>, PubMed:<a href="http://www.uniprot.org/citations/22819219" target="\_blank">22819219</a>, PubMed:<a

href="http://www.uniprot.org/citations/29416044" target="\_blank">29416044</a>, PubMed:<a href="http://www.uniprot.org/citations/32470140" target="\_blank">32470140</a>, PubMed:<a href="http://www.uniprot.org/citations/33157014" target="\_blank">33157014</a>). In response to nutrients, growth factors or amino acids, specifically activates the protein kinase activity of MTOR, the catalytic component of the mTORC1 complex: acts by causing a conformational change that allows the alignment of residues in the active site of MTOR, thereby enhancing the phosphorylation of ribosomal protein S6 kinase (RPS6KB1 and RPS6KB2) and EIF4EBP1 (4E-BP1) (PubMed:<a href="http://www.uniprot.org/citations/33157014" target="\_blank">33157014</a>, PubMed:<a href="http://www.uniprot.org/citations/29236692" target="\_blank">29236692</a>). RHEB is also required for localization of the TSC-TBC complex to lysosomal membranes (PubMed:<a href="http://www.uniprot.org/citations/24529379" target="\_blank">24529379</a>). In response to starvation, RHEB is inactivated by the TSC-TBC complex, preventing activation of mTORC1 (PubMed:<a href="http://www.uniprot.org/citations/24529379" target="\_blank">24529379</a>, PubMed:<a href="http://www.uniprot.org/citations/33157014" target="\_blank">33157014</a>). Has low intrinsic GTPase activity (PubMed:<a href="http://www.uniprot.org/citations/15340059" target="\_blank">15340059</a>).

### Cellular Location

Endomembrane system; Lipid-anchor; Cytoplasmic side. Lysosome membrane; Lipid- anchor; Cytoplasmic side. Golgi apparatus membrane; Lipid-anchor; Cytoplasmic side. Endoplasmic reticulum membrane; Lipid-anchor; Cytoplasmic side. Cytoplasm, cytosol. Note=Farnesylation is required for recruitment to lysosomal membranes, where it activates the mTORC1 complex.

### Tissue Location

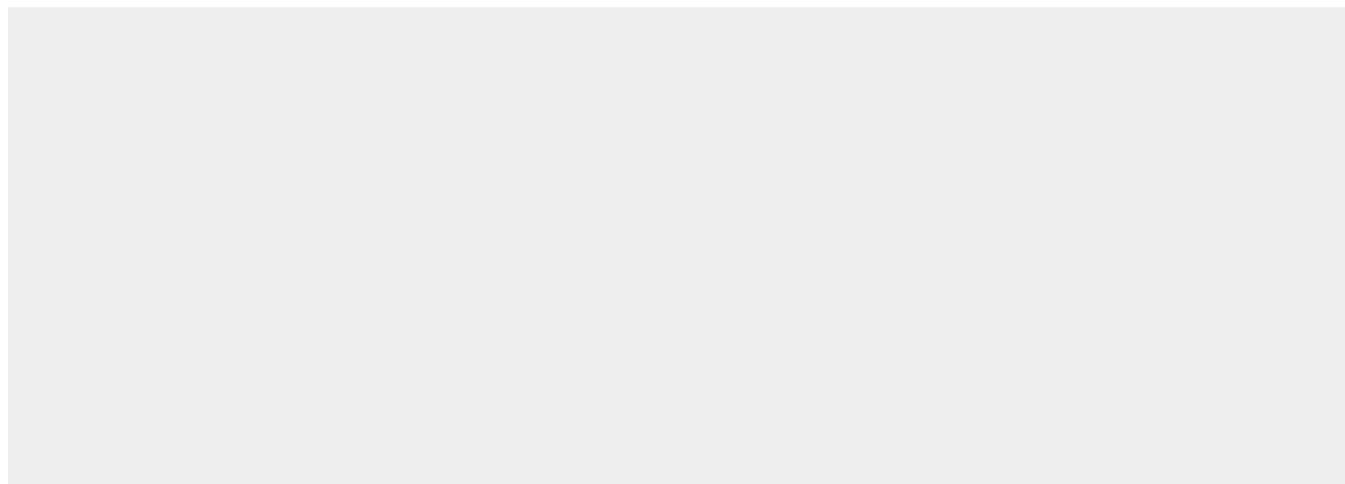
Ubiquitous (PubMed:8543055). Highest levels observed in skeletal and cardiac muscle (PubMed:8543055)

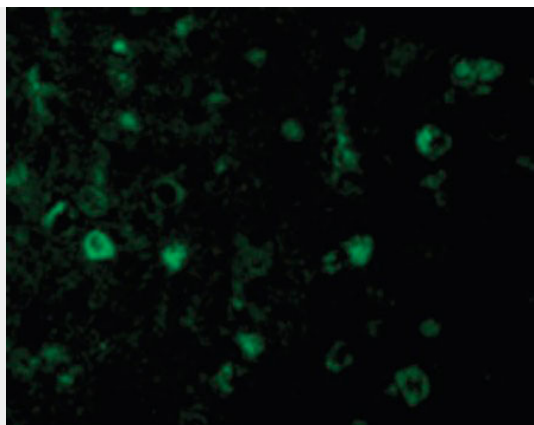
### RHEB Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

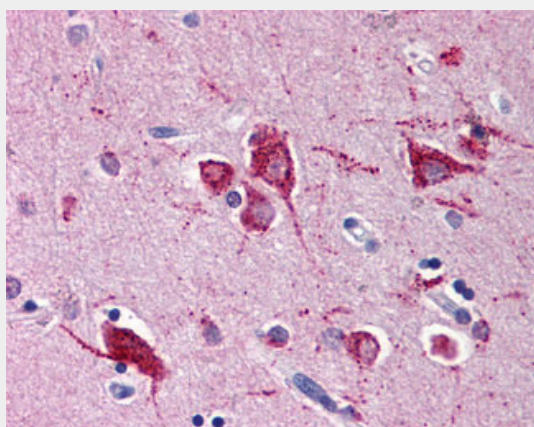
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### RHEB Antibody - Images





Immunofluorescence of Rheb in Mouse Brain cells with Rheb antibody at 20 ug/ml.



Anti-RHEB antibody IHC of human brain, cortex.

### **RHEB Antibody - Background**

Activates the protein kinase activity of mTORC1, and thereby plays a role in the regulation of apoptosis. Stimulates the phosphorylation of S6K1 and EIF4EBP1 through activation of mTORC1 signaling. Has low intrinsic GTPase activity.

### **RHEB Antibody - References**

Gromov P.S.,et al.FEBS Lett. 377:221-226(1995).  
Mizuki N.,et al.Genomics 34:114-118(1996).  
Weidenmueller U.,et al.Submitted (MAY-1999) to the EMBL/GenBank/DDBJ databases.  
Puhl H.L. III,et al.Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.  
Ota T.,et al.Nat. Genet. 36:40-45(2004).