

# RHEB Polyclonal Antibody

Catalog # AP73940

## Product Information

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Application	WB
Primary Accession	<a href="#">Q15382</a>
Reactivity	Human, Mouse, Rat, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	20497

## Additional Information

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Gene ID	6009
Other Names	Ras homolog enriched in brain
Dilution	WB~~WB 1:500-2000, ELISA 1:10000-20000
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20°C

## Protein Information

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Name	RHEB {ECO:0000303 PubMed:8543055, ECO:0000312 HGNC:HGNC:10011}
Function	<p>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="#">12172553</a>, PubMed:<a href="#">12271141</a>, PubMed:<a href="#">12842888</a>, PubMed:<a href="#">12869586</a>, PubMed:<a href="#">12906785</a>, PubMed:<a href="#">15340059</a>, PubMed:<a href="#">15854902</a>, PubMed:<a href="#">16098514</a>, PubMed:<a href="#">20381137</a>, PubMed:<a href="#">22819219</a>, PubMed:<a href="#">24529379</a>, PubMed:<a href="#">29416044</a>, PubMed:<a href="#">32470140</a>, PubMed:<a href="#">33157014</a>, PubMed:<a href="#">25816988</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="#">29236692</a>, PubMed:<a href="#">33157014</a>). RHEB is also required for localization of the TSC-TBC complex to lysosomal membranes (PubMed:<a href="#">24529379</a>). In response to starvation, RHEB is inactivated by the TSC-TBC complex, preventing activation of mTORC1 (PubMed:<a href="#">24529379</a>, PubMed:<a href="#">33157014</a>). Has low intrinsic GTPase activity (PubMed:<a href="#">15340059</a>).</p>

**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)

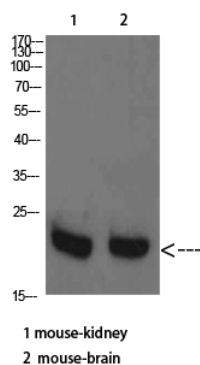
**Background**

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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.

**Images**

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Western Blot analysis of mouse-kidney mouse-brain cells using RHEB Polyclonal Antibody diluted at 1:2000. Secondary antibody was diluted at 1:20000

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.