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# Anti-RHEB Antibody (clone 2C11)

Mouse Anti Human Monoclonal Antibody
Catalog # ALS18144

## Product Information

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|---|---|
| **Application** | WB, IHC-P, E |
| **Primary Accession** | Q15382 |
| **Predicted** | Human, Mouse, Rat |
| **Host** | Mouse |
| **Clonality** | Monoclonal |
| **Isotype** | IgG1,k |
| **Clone Names** | 2C11 |
| **Calculated MW** | 20497 |
| **Concentration (mg/ml)** | 0.41 mg/ml |

## Additional Information

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|---|---|
| **Gene ID** | 6009 |
| **Alias Symbol** | RHEB |
| **Other Names** | RHEB, RHEB2, GTP-binding protein Rheb, Ras homolog enriched in brain |
| **Target/Specificity** | Human RHEB |
| **Reconstitution & Storage** | Protein A purified |
| **Precautions** | Anti-RHEB Antibody (clone 2C11) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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|---|---|
| **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:12172553, PubMed:12271141, PubMed:12842888, PubMed:12869586, PubMed:12906785, PubMed:15340059, PubMed:15854902, PubMed:16098514, PubMed:20381137, PubMed:22819219, PubMed:24529379, PubMed:29416044, PubMed:32470140, PubMed:33157014, PubMed:25816988). 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:29236692, PubMed:33157014). RHEB is also required for localization of the TSC-TBC complex to lysosomal membranes (PubMed:24529379). In response to starvation, RHEB is inactivated by the TSC-TBC complex, preventing activation of mTORC1 (PubMed:24529379, PubMed:33157014). Has low intrinsic GTPase activity (PubMed:15340059).

**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)

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