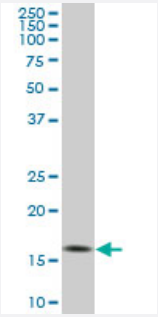
# RHEB monoclonal antibody (M01), clone 2C11

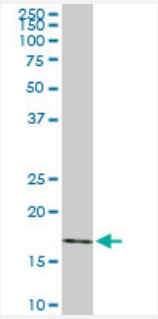
Catalog # H00006009-M01 Size 100 ug

## Applications



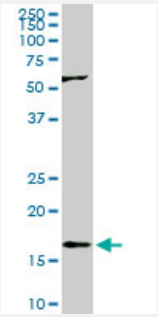

### Western Blot (Cell lysate)

RHEB monoclonal antibody (M01), clone 2C11. Western Blot analysis of RHEB expression in Jurkat ( Cat # L017V1 ).



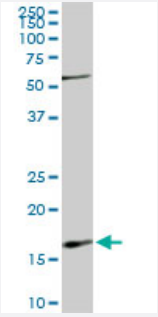

### Western Blot (Cell lysate)

RHEB monoclonal antibody (M01), clone 2C11. Western Blot analysis of RHEB expression in NIH/3T3 ( Cat # L018V1 ).




### Western Blot (Cell lysate)

RHEB monoclonal antibody (M01), clone 2C11. Western Blot analysis of RHEB expression in PC-12 ( Cat # L012V1 ).




### Western Blot (Cell lysate)

RHEB monoclonal antibody (M01), clone 2C11. Western Blot analysis of RHEB expression in Raw 264.7 ( Cat # L024V1 ).

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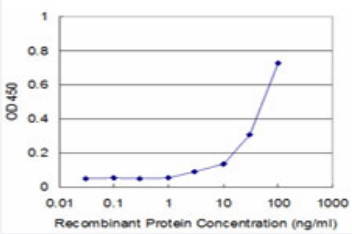
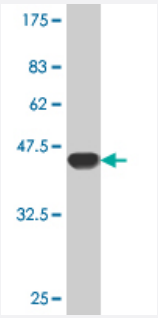



## Sandwich ELISA (Recombinant protein)

Detection limit for recombinant GST tagged RHEB is approximately 3ng/ml as a capture antibody.




Western Blot detection against Immunogen (45.98 KDa) .

## Specification

| | |
|---|---|
| **Product Description** | Mouse monoclonal antibody raised against a full-length recombinant RHEB. |
| **Immunogen** | RHEB (AAH16155, 1 a.a. ~ 184 a.a) full-length recombinant protein with GST tag. MW of the GST tag alone is 26 KDa. |
| **Sequence** | MPQSKSRKIAILGYRSVGKSSLTIQFVEGQFVDSYDPTIENTFTKLITVNGQEYHLQLVDTAGQDEYSIFPQTYSIDINGYILVYSVTSIKSFEVIKVIHGKLLDMVGKVQIPIMLVGNKKDLHMERVISYEEGKALAESWNAAFLESSAKENQTAVDVFRRIILEAEKMDGAASQGKSSCSVM |
| **Host** | Mouse |
| **Reactivity** | Human, Mouse, Rat |
| **Isotype** | IgG1 Kappa |
| **Quality Control Testing** | Antibody Reactive Against Recombinant Protein.<br>Western Blot detection against Immunogen (45.98 KDa) . |
| **Storage Buffer** | In 1x PBS, pH 7.4 |
| **Storage Instruction** | Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing. |

## Applications

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- Western Blot (Cell lysate)

  RHEB monoclonal antibody (M01), clone 2C11. Western Blot analysis of RHEB expression in Jurkat ( Cat # L017V1 ).

  Protocol Download

- Western Blot (Cell lysate)

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- Western Blot (Cell lysate)

  RHEB monoclonal antibody (M01), clone 2C11. Western Blot analysis of RHEB expression in Raw 264.7 ( Cat # L024V1 ).

  Protocol Download

- Western Blot (Recombinant protein)

  Protocol Download

- Sandwich ELISA (Recombinant protein)

  Detection limit for recombinant GST tagged RHEB is approximately 3ng/ml as a capture antibody.

  Protocol Download

- ELISA

## Gene Info — RHEB

| | |
|---|---|
| **Entrez GeneID** | 6009 |
| **GeneBank Accession#** | BC016155 |
| **Protein Accession#** | AAH16155 |
| **Gene Name** | RHEB |
| **Gene Alias** | MGC111559, RHEB2 |
| **Gene Description** | Ras homolog enriched in brain |

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| | |
|---|---|
| **Omim ID** | 601293 |
| **Gene Ontology** | Hyperlink |
| **Gene Summary** | This gene is a member of the small GTPase superfamily and encodes a lipid-anchored, cell mem brane protein with five repeats of the RAS-related GTP-binding region. This protein is vital in regul ation of growth and cell cycle progression due to its role in the insulin/TOR/S6K signaling pathway . The protein has GTPase activity and shuttles between a GDP-bound form and a GTP-bound for m, and farnesylation of the protein is required for this activity. Three pseudogenes have been map ped, two on chromosome 10 and one on chromosome 22. [provided by RefSeq |
| **Other Designations** | GTP-binding protein Rheb\|Ras homolog enriched in brain 2 |

## Publication Reference


- A new physiological medium uncovers biochemical and cellular alterations in Lesch-Nyhan disease fibroblasts.

  Paula Escudero-Ferruz, Neus Ontiveros, Claudia Cano-Estrada, Diane J Sutcliffe, H A Jinnah, Rosa J Torres, José M López.

  Molecular Immunology 2024 Jan; 30(1):3.

  Application: WB, Human, Primary fibroblasts

- Brain-enriched RagB isoforms regulate the dynamics of mTORC1 activity through GATOR1 inhibition.

  Gianluca Figlia, Sandra Müller, Anna M Hagenston, Susanne Kleber, Mykola Roiuk, Jan-Philipp Quast, Nora Ten Bosch, Damian Carvajal Ibañez, Daniela Mauceri, Ana Martin-Villalba, Aurelio A Teleman.

  Nature Cell Biology 2022 Sep; 24(9):1407.

  Application: WB-Ce, Mouse, Mouse embryonic fibroblasts

- Rheb regulates nuclear mTORC1 activity independent of farnesylation.

  Yanghao Zhong, Xin Zhou, Kun-Liang Guan, Jin Zhang.

  Cell Chemical Biology 2022 Jun; 29(6):1037.

  Application: IF, Mouse, NIH3T3 cells

- GPCR signaling inhibits mTORC1 via PKA phosphorylation of Raptor.

  Jewell JL, Fu V, Hong AW, Yu FX, Meng D, Melick CH, Wang H, Lam WM, Yuan HX, Taylor SS, Guan KL.

  Elife 2019 May; 8:e43038.

  Application: WB-Ce, Human, HEK 293T cells

- Ubiquitination of Rheb governs growth factor-induced mTORC1 activation.

  Deng L, Chen L, Zhao L, Xu Y, Peng X, Wang X, Ding L, Jin J, Teng H, Wang Y, Pan W, Yu F, Liao L, Li L, Ge X, Wang P.

  Cell Research 2019 Feb; 29(2):136.

  Application: WB-Tr, Human, HEK 293T cells


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- The mTORC1 Signaling Network Senses Changes in Cellular Purine Nucleotide Levels.

  Hoxhaj G, Hughes-Hallett J, Timson RC, Ilagan E, Yuan M, Asara JM, Ben-Sahra I, Manning BD.

  Cell Reports 2017 Oct; 21(5):1331.

  Application: WB-Tr, Human , A-549, HeLa cells

- RHEB1 insufficiency in aged male mice is associated with stress-induced seizures.

  Tian Q, Gromov P, Clement JH, Wang Y, Riemann M, Weih F, Sun XX, Dai MS, Fedorov LM.

  GeroScience 2017 Dec; 39(5-6):557.

  Application: WB-Ce, WB-Ti, Mouse, MEF cells and brain tissues from euthanized mice

- Identification of mechanically regulated phosphorylation sites on tuberin (TSC2) that control mechanistic target of rapamycin (mTOR) signaling.

  Jacobs BL, McNally RM, Kim KJ, Blanco R, Privett RE, You JS, Hornberger TA.

  Journal of Biological Chemistry 2017 Mar; 292(17):6987.

  Application: WB-Ti, Mouse, Mouse skeletal muscle

- p53 Deletion or Hot-spot Mutations Enhance mTORC1 Activity by Altering Lysosomal Dynamics of TSC2 and Rheb.

  Agarwal S, Bell CM, Taylor SM, Moran RG.

  Molecular Cancer Research 2016 Jan; 14(1):66.

  Application: IF, Human, HCT116, H1299 cells

- Spatial Control of the TSC Complex Integrates Insulin and Nutrient Regulation of mTORC1 at the Lysosome.

  Menon S, Dibble CC, Talbott G, Hoxhaj G, Valvezan AJ, Takahashi H, Cantley LC, Manning BD.

  Cell 2014 Feb; 156(4):771.

  Application: IF, WB-Tr, Human, HeLa cells

## Pathway

- Insulin signaling pathway
- mTOR signaling pathway

## Disease

- Genetic Predisposition to Disease
- Urinary Bladder Neoplasms

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