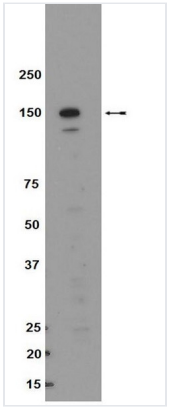
# Raptor (RPTOR) Antibody – Rabbit Polyclonal

## PRODUCT OVERVIEW

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| **Product Name** | Raptor (RPTOR), Polyclonal Antibody |
| **Full Product Name** | Raptor (Regulatory Associated Protein of mTOR, p150 Target of Rapamycin (TOR) Scaffold Protein containing WD-repeats, KIAA1303) (MaxLight 550) |
| **Product Gene Name** | anti-RPTOR antibody |
| **Clonality** | Polyclonal |
| **Isotype** | IgG |
| **Host** | Rabbit |
| **Species Reactivity** | Human |
| **Form/Format** | Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight550. |
| **Purity/Purification** | Purified by affinity chromatography. |
| **Specificity** | Recognizes human Raptor. |
| **Preparation and Storage** | Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight550 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap. |
| **Molecular Weight** | 149038 MW |
| **OMIM** | AY090663 mRNA |
| **3D Structure** | ModBase 3D Structure for Q8N122 |
| **Immunogen** | KLH conjugated peptide encompassing the N-terminal region of human Raptor. |
| **Conjugate** | MaxLight550 |
| **Note** | Preservative Free |
| **Product Categories/Family for anti-RPTOR antibody** | Antibodies; Protein Kinase Inhibitors |
| **Applications Tested/Suitable for anti-RPTOR antibody** | Immunoblot (IB), Immunoprecipitation (IP), Western Blot (WB) |
| **Application Notes for anti-RPTOR antibody** | IB: A 1:1,000-2,500 dilution of the lot detected endogenous Raptor in lysate from 293T cells.<br>IP Analysis: Reported by an independent laboratory to immunoprecipitate endogenous Raptor.<br>WB: 1:1,000-2,500<br>Applications are based on unconjugated antibody. |
| **Related Product Information for anti-RPTOR antibody** | MBS6496949 is an antibody targeting RPTOR. Also known as Raptor (Regulatory Associated Protein of mTOR, p150 Target of Rapamycin (TOR) Scaffold Protein containing WD-repeats, KIAA1303) (MaxLight 550). Reactive in Human. Host: Rabbit. |

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| **Product References and Citations for anti-RPTOR antibody** | 1. Tzatsos, Alexandros and Kandror, Konstantin V (2006). Nutrients suppress phosphatidylinositol 3-kinase/Akt signaling via raptor-dependent mTOR-mediated insulin receptor substrate 1 phosphorylation. Mol Cell Biol 26: 63-76. 2. Sarbassov, Dos D and Sabatini, David M (2005). Redox regulation of the nutrient-sensitive raptor-mTOR pathway and complex. J Biol Chem 280: 39505-9. 3. Nojima, Hiroki, et al (2003). The mammalian target of rapamycin (mTOR) partner, raptor, binds the mTOR substrates p70 S6 kinase and 4E-BP1 through their TOR signaling (TOS) motif. J Biol Chem 278: 15461-4. 4. Hara, Kenta, et al (2002). Raptor, a binding partner of target of rapamycin (TOR), mediates TOR action. Cell 110: 177-89. 5. Kim, Do-Hyung, et al (2002). mTOR interacts with raptor to form a nutrient-sensitive complex that signals to the cell growth machinery. Cell 110: 163-75. |
| **Other Notes** | Small volumes of anti-RPTOR antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |




**Western Blot (WB) of anti-RPTOR antibody**
WB: Lysates from 293T cells were resolved by electrophoresis, transferred to PVDF (Immobilon-P), and probed with Raptor for 2 hours at room temperature. Proteins were visualized via HRP and chemiluminescent detection. Arrow indicates Raptor.

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for RPTOR. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 251823858 |
| **NCBI GeneID** | 57521 |
| **NCBI Accession #** | NP_001156506.1 |
| **UniProt Primary Accession #** | Q8N122 |
| **UniProt Secondary Accession #** | Q8N4V9; Q8TB32; Q9P2P3; B2RN36; C6KEF2; F5H7J5 |
| **UniProt Related Accession #** | Q8N122 |
| **GenBank Nucleotide #** | NM_020761.2 |
| **NCBI Official Full Name** | regulatory-associated protein of mTOR isoform 2 |
| **NCBI Official Synonym Full Names** | regulatory associated protein of MTOR complex 1 |
| **NCBI Official Symbol** | RPTOR |
| **NCBI Official Synonym Symbols** | KOG1; Mip1 |
| **UniProt Protein Name** | Regulatory-associated protein of mTOR |
| **UniProt Synonym Protein Names** | p150 target of rapamycin (TOR)-scaffold protein |
| **Protein Family** | Regulatory-associated protein |
| **UniProt Gene Name** | RPTOR |
| **UniProt Synonym Gene Names** | KIAA1303; RAPTOR; Raptor |

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| **NCBI Protein Information** | regulatory-associated protein of mTOR |
| **NCBI Summary for RPTOR** | This gene encodes a component of a signaling pathway that regulates cell growth in response to nutrient and insulin levels. The encoded protein forms a stoichiometric complex with the mTOR kinase, and also associates with eukaryotic initiation factor 4E-binding protein-1 and ribosomal protein S6 kinase. The protein positively regulates the downstream effector ribosomal protein S6 kinase, and negatively regulates the mTOR kinase. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Sep 2009] |
| **UniProt Comments for RPTOR** | Involved in the control of the mammalian target of rapamycin complex 1 (mTORC1) activity which regulates cell growth and survival, and autophagy in response to nutrient and hormonal signals; functions as a scaffold for recruiting mTORC1 substrates. mTORC1 is activated in response to growth factors or amino acids. Growth factor-stimulated mTORC1 activation involves a AKT1-mediated phosphorylation of TSC1-TSC2, which leads to the activation of the RHEB GTPase that potently activates the protein kinase activity of mTORC1. Amino acid-signaling to mTORC1 requires its relocalization to the lysosomes mediated by the Ragulator complex and the Rag GTPases. Activated mTORC1 up-regulates protein synthesis by phosphorylating key regulators of mRNA translation and ribosome synthesis. mTORC1 phosphorylates EIF4EBP1 and releases it from inhibiting the elongation initiation factor 4E (eiF4E). mTORC1 phosphorylates and activates S6K1 at 'Thr-389', which then promotes protein synthesis by phosphorylating PDCD4 and targeting it for degradation. Involved in ciliogenesis. |
| **Research Articles on RPTOR** | **1.** RPTOR (regulatory associated protein of mTOR, complex 1) is a novel target of miR-155 in CF lung epithelial cells. The suppression of RPTOR expression and subsequent activation of TGF-beta signaling resulted in the induction of fibrosis by elevating connective tissue growth factor (CTGF) abundance in CF lung epithelial cells. |
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