

Rabbit Raptor Polyclonal Antibody | anti-RPTOR antibody

Phospho-Raptor (Ser792) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329856	Rabbit	Human, Rat Predicted Reactivity: Pig (86%), Zebrafish (86%), Bovine (86%), Horse (86%), Sheep (86%), Dog (86%), Chicken (86%)	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

Raptor; Polyclonal Antibody; Phospho-Raptor (Ser792) Antibody; KIAA1303; KOG1; Mip1; P150 target of rapamycin (TOR) scaffold protein; p150 target of rapamycin (TOR) scaffold protein containing WD repeats; P150 target of rapamycin (TOR)-scaffold protein; Regulatory associated protein of mTOR; Regulatory associated protein of MTOR complex 1; Regulatory-associated protein of mTOR; RPTOR; RPTOR_HUMAN; anti-RPTOR antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Rat Predicted Reactivity: Pig (86%), Zebrafish (86%), Bovine (86%), Horse (86%), Sheep (86%), Dog (86%), Chicken (86%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-Raptor (Ser792) Antibody detects endogenous levels of Raptor only when phosphorylated at Ser792. Tissue Specificity: Highly expressed in skeletal muscle, and in a lesser extent in brain, lung, small intestine, kidney and placenta. Isoform 3 is widely expressed, with highest levels in nasal mucosa and pituitary and lowest in spleen.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-RPTOR antibody	ELISA (Peptide ELISA), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human Raptor around the phosphorylation site of Ser792.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	Insulin-stimulated phosphorylation at Ser-863 by MTOR and MAPK8 up-regulates mTORC1 activity. Osmotic stress also induces phosphorylation at Ser-696, Thr-706 and Ser-863 by MAPK8. Ser-863 phosphorylation is required for phosphorylation at Ser-855 and Ser-859. In response to nutrient limitation, phosphorylated by AMPK; phosphorylation promotes interaction with 14-3-3 proteins, leading to negative regulation of the mTORC1 complex. In response to growth factors, phosphorylated at Ser-719, Ser-721 and Ser-722 by RPS6KA1, which stimulates mTORC1 activity.

Subunit Structure	Part of the mammalian target of rapamycin complex 1 (mTORC1) which contains MTOR, MLST8, RPTOR, AKT1S1/PRAS40 and DEPTOR. mTORC1 binds to and is inhibited by FKBP12-rapamycin. Binds directly to 4EBP1 and RPS6KB1 independently of its association with MTOR. Binds preferentially to poorly or non-phosphorylated forms of EIF4EBP1, and this binding is critical to the ability of MTOR to catalyze phosphorylation. Forms a complex with MTOR under both leucine-rich and -poor conditions. Interacts with ULK1 in a nutrient-dependent manner; the interaction is reduced during starvation. Interacts (when phosphorylated by AMPK) with 14-3-3 protein, leading to inhibition of its activity. Interacts with SPAG5; SPAG5 competes with MTOR for RPTOR-binding, resulting in decreased mTORC1 formation. Interacts with WAC; WAC positively regulates MTOR activity by promoting the assembly of the TTT complex composed of TELO2, TTI1 and TTI2 and the RUVBL complex composed of RUVBL1 and RUVBL2 into the TTT-RUVBL complex which leads to the dimerization of the mTORC1 complex and its subsequent activation. Interacts with G3BP1. The complex formed with G3BP1 AND SPAG5 is increased by oxidative stress. Interacts with HTR6. Interacts with PIH1D1. Interacts with LARP1. Interacts with BRAT1. Interacts with SIK3. (Microbial infection) Interacts with vaccinia virus protein F17; this interaction dysregulates mTOR.
Similarity	Belongs to the WD repeat RAPTOR family.
Subcellular Location	Cytoplasm. Lysosome. Cytoplasmic granule. Note: Targeting to lysosomes depends on amino acid availability. In arsenite-stressed cells, accumulates in stress granules when associated with SPAG5 and association with lysosomes is drastically decreased.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IHC (Immunohiostchemistry)

Staining Rat heart tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



WB (Western Blot)

Western blot analysis of Raptor (Phospho-Ser792) using Insulin treated Jurkat whole cell lysates. -/+ means absence or presence of N peptidei3/4non-phospho peptide) and P peptide(phospho peptide).

ADDITIONAL INFORMATION

Related Product Information for anti-RPTOR antibody	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.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	251823858
NCBI GeneID	57521
NCBI Accession #	NP_001156506.1
NCBI GenBank Nucleotide #	NM_001163034.1
UniProt Accession #	Q8N122; Q8N4V9; Q8TB32; Q9P2P3; B2RN36; C6KEF2; F5H7J5
Molecular Weight	149038 MW
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
NCBI Protein Information	regulatory-associated protein of mTOR
UniProt Protein Name	Regulatory-associated protein of mTOR
UniProt Gene Name	RPTOR
UniProt Synonym Gene Names	KIAA1303; RAPTOR; Raptor

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/raptor-antibody-peptide-elisa-immunohistochemistry-western-blot-elisa/329856>