



# Rabbit (polyclonal) Anti-mTOR Unconjugated

## PRODUCT ANALYSIS SHEET

---

<b>Catalog Number:</b>	AHO1212
<b>Lot Number:</b>	See product label
<b>Quantity/Volume:</b>	100 µg/200 µL
<b>Isotype:</b>	Rabbit Ig
<b>Form of Antibody:</b>	Purified immunoglobulin in phosphate buffered saline containing 1% BSA.
<b>Preservative:</b>	0.1% sodium azide (Caution: sodium azide is a poisonous and hazardous substance. Handle with care and dispose of properly.)
<b>Purification:</b>	Purified by Protein A affinity chromatography.
<b>Immunogen:</b>	Recombinant protein, corresponding to a fragment of human mTOR, expressed in <i>E. coli</i> .
<b>Description:</b>	Mammalian target of Rapamycin (mTOR), also known as FKBP12-rapamycin-associated protein (FRAP) is a ~280 kDa serine/threonine kinase and a key modulator of cell growth and protein synthesis. mTOR is implicated in cancer and neurite plasticity, and plays a central role in mediating phosphoinositide 3-kinase (PI3 kinase) and Akt/PKB signals for cell growth, proliferation, and protein translation via ribosomal S6 kinase (S6Ks) and translation regulator eIF4E-binding protein 1. mTOR is differentially phosphorylated on threonine 2446 and serine 2448 in response to nutrient status and growth factor stimulation.
<b>Species Reactivity:</b>	Human, mouse and rat. Other species were not tested.
<b>Applications:</b>	The antibody has been used for Western blotting applications.
<b>Suggested Working Dilutions:</b>	For Western blotting applications, we recommend using the antibody at 0.1-1.0 µg/mL. The optimal antibody concentration should be determined empirically for each specific application.
<b>Storage:</b>	Store at 2-8°C for up to one month. For long term storage, apportion into working aliquots and store at -20°C. Avoid repeated freeze-thaw cycles to prevent denaturing the antibody.
<b>Recommended Positive Controls:</b>	Human MCF-7, mouse L929 cells.

**This product is for research use only. Not for use in diagnostic procedures.**

[www.invitrogen.com](http://www.invitrogen.com)

Invitrogen Corporation • 542 Flynn Rd • Camarillo • CA 93012 • Tel: 800.955.6288 • E-mail: [techsupport@invitrogen.com](mailto:techsupport@invitrogen.com)

PI AHO1212

(Rev 10/08) DCC-08-1089

**Important Licensing Information** - These products may be covered by one or more Limited Use Label Licenses (see the Invitrogen Catalog or our website, [www.invitrogen.com](http://www.invitrogen.com)). By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

**References:**

- Sarbassov, D.D., et al. (2005) Phosphorylation and regulation of Akt/PKB by the rictor-mTOR complex. *Science* 307(5712):1098-1101.
- Tee, A.R. and J. Blenis (2005) mTOR, translational control and human disease. *Semin. Cell Dev. Biol.* 6(1):29-37.
- Mourani, P.M., et al. (2004) Unique, highly proliferative growth phenotype expressed by embryonic and neointimal smooth muscle cells is driven by constitutive Akt, mTOR, and p70S6K signaling and is actively repressed by PTEN. *Circulation* 109(10):1299-1306.
- Hay, N. and Sonenberg, N. (2004) Upstream and downstream of mTOR. *Genes Dev.* 18(16):1926-1945.
- Rao, R.D., et al. (2004) Mammalian target of rapamycin (mTOR) inhibitors as anti-cancer agents. *Curr. Cancer Drug Targets* 4(8):621-635.
- Reynolds, T.H., et al. (2002) Control of Ser2448 phosphorylation in the mammalian target of rapamycin by insulin and skeletal muscle load. *J. Biol. Chem.* 277(20):17657-17662.
- Zhang, X., et al. (2002) Predominant nuclear localization of mammalian target of rapamycin in normal and malignant cells in culture. *J. Biol. Chem.* 277(31):28127-28134.
- Tang, S.J., et al. (2002) A rapamycin-sensitive signaling pathway contributes to long-term synaptic plasticity in the hippocampus. *Proc. Nat'l. Acad. Sci.* 99(1):467-472.

**Related Products:**

AKT Pathway Phospho 7-Plex Antibody Bead Kit	Cat. #	LHO0001
AKT Pathway Total 7-Plex Antibody Bead Kit	Cat. #	LHO0002
mTOR Antibody (mouse monoclonal)	Cat. #	AHO1232
mTOR [pS2448] Phosphospecific Antibody	Cat. #	44-1125G
p70S6 kinase [pT229] Phosphospecific Antibody	Cat. #	44-918
Akt/PKB Pan Antibody	Cat. #	44-609G
Akt/PKB [pT308] Phosphospecific Antibody	Cat. #	44-602G
Akt/PKB [pS473] Phosphospecific Antibody	Cat. #	44-622G
PTEN [pSpTpS380/382/385] Phosphospecific Antibody	Cat. #	44-1066G
PTEN [pS385] Phosphospecific Antibody	Cat. #	44-1064G
RSK1 [pS221] / RSK2 [pS227] Phosphospecific Antibody	Cat. #	44-924G
RSK1 [pS380] / RSK2 [pS386] Phosphospecific Antibody	Cat. #	44-928G
RSK1 [pS363] / RSK2 [pS396] Phosphospecific Antibody	Cat. #	44-926G
eIF4G [pS1108] Phosphospecific Antibody	Cat. #	44-526
RP S6 [pSpS235/236] Phosphospecific Antibody	Cat. #	44-922G
RP S6 [pSpS244/247] Phosphospecific Antibody	Cat. #	44-923G

**This product is for research use only. Not for use in diagnostic procedures.**

[www.invitrogen.com](http://www.invitrogen.com)

Invitrogen Corporation • 542 Flynn Rd • Camarillo • CA 93012 • Tel: 800.955.6288 • E-mail: [techsupport@invitrogen.com](mailto:techsupport@invitrogen.com)

PI AHO1212

(Rev 10/08) DCC-08-1089

**Important Licensing Information** - These products may be covered by one or more Limited Use Label Licenses (see the Invitrogen Catalog or our website, [www.invitrogen.com](http://www.invitrogen.com)). By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.



Extract prepared from human MCF-7 cells was resolved by SDS-PAGE on a 4-20% polyacrylamide gel and transferred to PVDF. The membrane was blocked with a 5% milk-TBST buffer and then incubated with this rabbit polyclonal antibody at 0.50 µg/mL for two hours at room temperature in a 5% milk-TBST buffer. After washing, the membrane was incubated with goat F(ab')<sub>2</sub> anti-rabbit IgG alkaline phosphatase (Cat. # ALI4405) and signal was detected using the Tropix WesternStar™ method.

**This product is for research use only. Not for use in diagnostic procedures.**

[www.invitrogen.com](http://www.invitrogen.com)

Invitrogen Corporation • 542 Flynn Rd • Camarillo • CA 93012 • Tel: 800.955.6288 • E-mail: [techsupport@invitrogen.com](mailto:techsupport@invitrogen.com)

PI AHO1212

(Rev 10/08) DCC-08-1089

**Important Licensing Information** - These products may be covered by one or more Limited Use Label Licenses (see the Invitrogen Catalog or our website, [www.invitrogen.com](http://www.invitrogen.com)). By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.