

Product datasheet

Anti-mTOR (phospho S2448) antibody - C-terminal ab226957

[1 Abreviews](#) [1 Image](#)

Overview

Product name	Anti-mTOR (phospho S2448) antibody - C-terminal
Description	Rabbit polyclonal to mTOR (phospho S2448) - C-terminal
Host species	Rabbit
Tested applications	Suitable for: WB
Species reactivity	Reacts with: Human Predicted to work with: Mouse, Rat, Sheep 
Immunogen	Synthetic peptide within Human mTOR (C terminal) (phospho S2448). The exact sequence is proprietary. Carrier-protein conjugated. Database link: P42345
Positive control	WB: EGF treated HEK-293T whole cell extract.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.00 Preservative: 0.025% Proclin Constituents: PBS, 1% BSA, 20% Glycerol
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab226957** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/500 - 1/3000. Predicted molecular weight: 289 kDa.

Target

Function

Kinase subunit of both mTORC1 and mTORC2, which regulates cell growth and survival in response to nutrient and hormonal signals. mTORC1 is activated in response to growth factors or amino-acids. Growth factor-stimulated mTORC1 activation involves 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-421', which then promotes protein synthesis by phosphorylating PDCD4 and targeting it for degradation. Phosphorylates MAF1 leading to attenuation of its RNA polymerase III-repressive function. mTORC2 is also activated by growth factors, but seems to be nutrient-insensitive. mTORC2 seems to function upstream of Rho GTPases to regulate the actin cytoskeleton, probably by activating one or more Rho-type guanine nucleotide exchange factors. mTORC2 promotes the serum-induced formation of stress-fibers or F-actin. mTORC2 plays a critical role in AKT1 'Ser-473' phosphorylation, which may facilitate the phosphorylation of the activation loop of AKT1 on 'Thr-308' by PDK1 which is a prerequisite for full activation. mTORC2 regulates the phosphorylation of SGK1 at 'Ser-422'. mTORC2 also modulates the phosphorylation of PRKCA on 'Ser-657'.

Tissue specificity

Expressed in numerous tissues, with highest levels in testis.

Sequence similarities

Belongs to the PI3/PI4-kinase family.
 Contains 1 FAT domain.
 Contains 1 FATC domain.
 Contains 7 HEAT repeats.
 Contains 1 PI3K/PI4K domain.

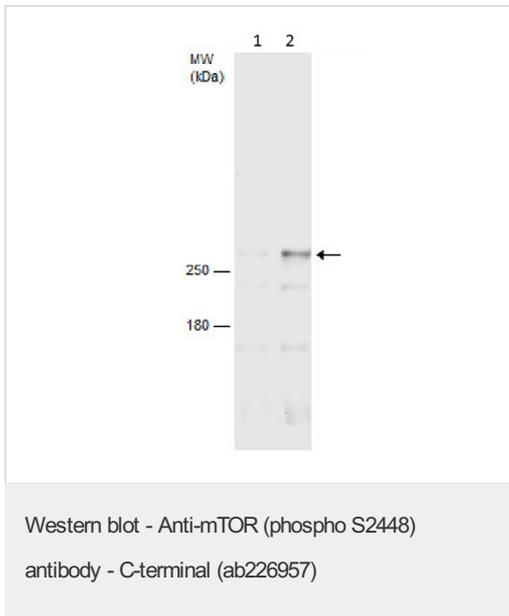
Post-translational modifications

Autophosphorylated; when part of mTORC1 or mTORC2.

Cellular localization

Endoplasmic reticulum membrane. Golgi apparatus membrane. Mitochondrion outer membrane. Lysosome. Cytoplasm. Nucleus > PML body. Shuttles between cytoplasm and nucleus. Accumulates in the nucleus in response to hypoxia (By similarity). Targeting to lysosomes depends on amino acid availability and RRAGA and RRAGB.

Images



All lanes : Anti-mTOR (phospho S2448) antibody - C-terminal (ab226957) at 1/500 dilution

Lane 1 : Untreated HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell extract

Lane 2 : HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) treated with 200 ng/ml EGF for 0.5 hour, whole cell extract

Lysates/proteins at 60 µg per lane.

Predicted band size: 289 kDa

5% SDS-PAGE gel.

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