

# Anti-mTOR antibody [EPR390(N)] - BSA and Azide free ab248718

KO VALIDATED

Recombinant

RabMAb

2 Images

### Overview

<b>Product name</b>	Anti-mTOR antibody [EPR390(N)] - BSA and Azide free
<b>Description</b>	Rabbit monoclonal [EPR390(N)] to mTOR - BSA and Azide free
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB <b>Unsuitable for:</b> Flow Cyt, ICC/IF, IHC-P or IP
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	WB: HEK-293 cell lysate.
<b>General notes</b>	<p>ab248718 is the carrier-free version of <a href="#">ab134903</a>.</p> <p>Our <b>carrier-free</b> antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.</p> <p>This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.</p> <p>Use our <b>conjugation kits</b> for antibody conjugates that are ready-to-use in as little as 20 minutes with &lt;1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.</p> <p>This product is compatible with the Maxpar<sup>®</sup> Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar<sup>®</sup> is a trademark of Fluidigm Canada Inc.</p> <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p>

## Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR390(N)
Isotype	IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab248718 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		Use at an assay dependent concentration. Predicted molecular weight: 289 kDa.

**Application notes** Is unsuitable for Flow Cyt, ICC/IF, IHC-P or IP.

## 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 potentially 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/P4-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.

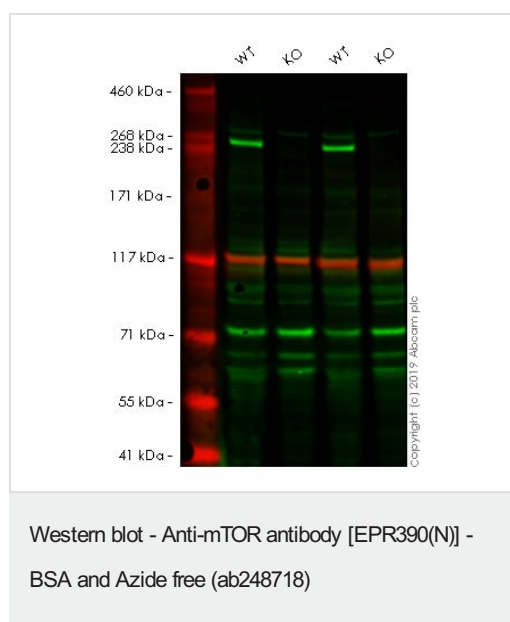
## Cellular localization

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 antibody [EPR390(N)] ([ab134903](#)) at 1/10000 dilution

**Lane 1 :** Wild-type HEK-293 cell lysate

**Lane 2 :** MTOR knockout HEK-293 cell lysate

**Lane 3 :** Wild-type HEK-293T cell lysate

**Lane 4 :** MTOR knockout HEK-293T cell lysate

Lysates/proteins at 20 µg per lane.

**Predicted band size:** 289 kDa

**Observed band size:** 289 kDa

This data was developed using the same antibody clone in a different buffer formulation ([ab134903](#)).

**Lanes 1 - 4:** Merged signal (red and green). Green - [ab134903](#) observed at 289 kDa. Red - loading control, [ab130007](#) observed at 125 kDa.

[ab134903](#) was shown to react with mTOR in wild-type HEK-293T cells. Loss of signal was observed when knockout cell line [ab255411](#) (knockout cell lysate [ab263789](#)) was used. Wild-type and mTOR knockout samples were subjected to SDS-PAGE. [ab134903](#) and Anti-Vinculin antibody [VIN-54] ([ab130007](#)) were incubated overnight at 4°C at 1 in 10000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed ([ab216776](#)) secondary antibodies at 1 in 20000 dilution for 1 hour at room

temperature before imaging.

Why choose a recombinant antibody?

 <p><b>Research with confidence</b> Consistent and reproducible results</p>	 <p><b>Long-term and scalable supply</b> Recombinant technology</p>
 <p><b>Success from the first experiment</b> Confirmed specificity</p>	 <p><b>Ethical standards compliant</b> Animal-free production</p>

Anti-mTOR antibody [EPR390(N)] - BSA and Azide free (ab248718)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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