abcam

Product datasheet

Anti-mTOR antibody [EPR390(N)] ab134903

KO 評価済 リコンビナント RabMAb

88 References 画像数 5

製品の概要

製品名	Anti-mTOR antibody [EPR390(N)]
製品の詳細	Rabbit monoclonal [EPR390(N)] to mTOR
由来種	Rabbit
特異性	Expression levels of the target protein vary with sample type and some optimisation may be required.
アプリケーション	**適用あり:** WB **適用なし:** Flow Cyt,ICC/IF,IHC-P or IP
種交差性	**交差種:** Mouse, Rat, Human
免疫原	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
ポジティブ・コントロール	WB: Human brain, heart, liver and kidney lysates, Mouse brain heart, liver and kidney lysates, Rat brain, heart and kidney lysates, HeLa, Jurkat, MCF7, K562, Raji, HepG2, and HEK-293T cell lysates
特記事項	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
バッファー	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 9% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA, 50% Tissue culture supernatant
精製度	Protein A purified

ポリ/モノ	モノクローナル
クローン名	EPR390(N)
アイソタイプ	IgG

アプリケーション

The Abpromise guarantee **Abpromise保証は、次のテスト済みアプリケーションにおけるab134903の使用に適用されます**

アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

アプリケーション	Abreviews	特記事項
WB		1/10000. Predicted molecular weight: 289 kDa.

追加情報 Is unsuitable for Flow Cyt,ICC/IF,IHC-P or IP.

ターゲット情報

機能 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'.

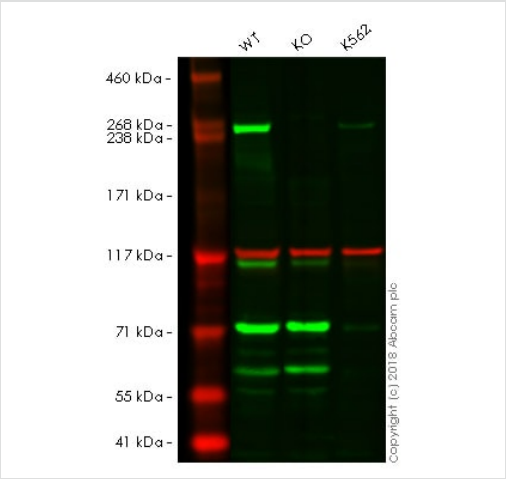
組織特異性 Expressed in numerous tissues, with highest levels in testis.

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

翻訳後修飾 Autophosphorylated; when part of mTORC1 or mTORC2.

細胞内局在 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.

画像



Western blot - Anti-mTOR antibody [EPR390(N)] (ab134903)

All lanes : Anti-mTOR antibody [EPR390(N)] (ab134903) at 1/10000 dilution

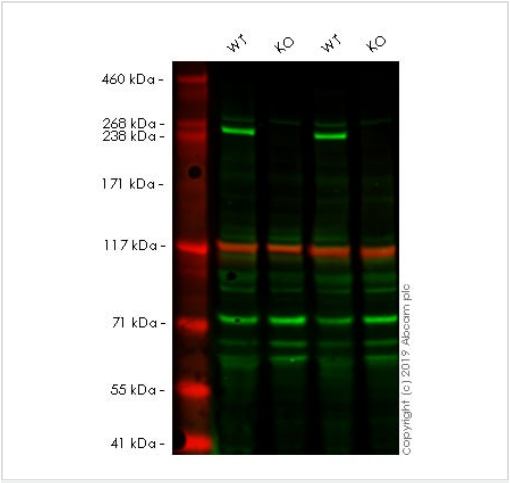
Lane 1 : Wild-type HEK293T whole cell lysate
Lane 2 : MTOR knockout HEK293T whole cell lysate
Lane 3 : K562 whole cell lysate

Lysates/proteins at 20 µg per lane.

Predicted band size: 289 kDa

Lanes 1 - 3: Merged signal (red and green). Green - ab134903 observed at 289 kDa. Red - loading control, **ab130007**, observed at 130 kDa.

ab134903 was shown to specifically react with mTOR in wild-type HEK293T cells as signal was lost in MTOR knockout cells. Wild-type and MTOR knockout samples were subjected to SDS-PAGE. Ab134903 and **ab130007** (Mouse anti-Vinculin loading control) were incubated overnight at 4°C at 1/10000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed **ab216773** and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed **ab216776** secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-mTOR antibody [EPR390(N)] (ab134903)

All lanes : Anti-mTOR antibody [EPR390(N)] (ab134903) at 1/10000 dilution

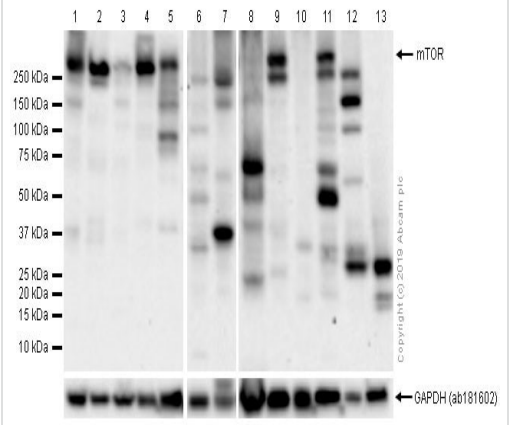
Lane 1 : Wild-type HEK-293 cell lysate
Lane 2 : MTOR knockout HEK-293 cell lysate
Lane 3 : Wild-type HEK-293T cell lysate
Lane 4 : MTOR knockout HEK-293T cell lysate

Lysates/proteins at 20 µg per lane.

Predicted band size: 289 kDa

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.



Western blot - Anti-mTOR antibody [EPR390(N)] (ab134903)

All lanes : Anti-mTOR antibody [EPR390(N)] (ab134903) at 1/1000 dilution

Lane 1 : MCF7 (Human breast adenocarcinoma epithelial cell) whole cell lysates
Lane 2 : HepG2 (Human hepatocellular carcinoma epithelial cell) whole cell lysates
Lane 3 : Human brain lysates
Lane 4 : Mouse brain lysates
Lane 5 : Rat brain lysates
Lane 6 : Human liver lysates
Lane 7 : Mouse liver lysates
Lane 8 : Human heart lysates
Lane 9 : Mouse heart lysates

Lane 10 : Rat heart lysates
Lane 11 : Human kidney lysates
Lane 12 : Mouse kidney lysates
Lane 13 : Rat kidney lysates

Lysates/proteins at 20 µg per lane.

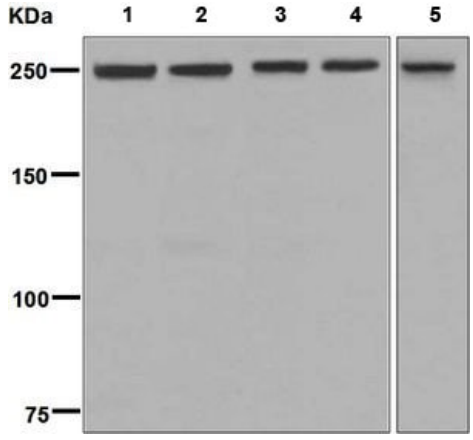
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 289 kDa
Observed band size: 290 kDa

Blocking buffer and concentration 5% NFDM/TBST
Diluting buffer and concentration 5% NFDM/TBST

Exposure time:
Lane 1 to 5: 80 seconds
Lane 6 to 13: 180 seconds

This antibody detects non-specific bands. It doesn't detect the target band in some mouse and rat tissues.



Western blot - Anti-mTOR antibody [EPR390(N)] (ab134903)

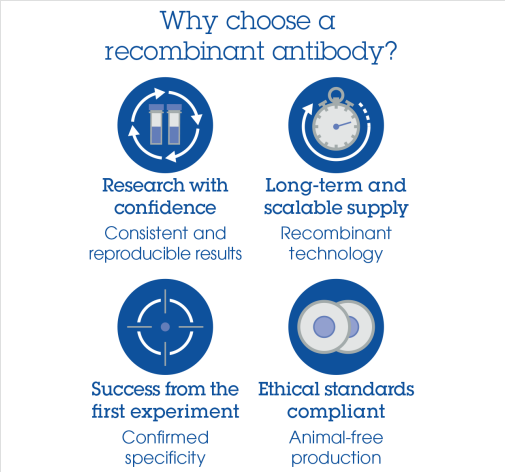
All lanes : Anti-mTOR antibody [EPR390(N)] (ab134903) at 1/10000 dilution

Lane 1 : HeLa cell lysate
Lane 2 : K562 cell lysate
Lane 3 : Raji cell lysate
Lane 4 : HepG2 cell lysate
Lane 5 : 293T cell lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : HRP-conjugated goat anti-rabbit polyclonal IgG at 1/2000 dilution

Predicted band size: 289 kDa
Observed band size: 289 kDa



Anti-mTOR antibody [EPR390(N)] (ab134903)

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

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.co.jp/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors