

## Product datasheet

# Anti-Raptor antibody [EP539Y] ab40768

Recombinant **RabMAB**

★★★★☆ 3 Abreviews 9 References 6 Images

### Overview

<b>Product name</b>	Anti-Raptor antibody [EP539Y]
<b>Description</b>	Rabbit monoclonal [EP539Y] to Raptor
<b>Tested applications</b>	<b>Suitable for:</b> WB, IHC-P <b>Unsuitable for:</b> Flow Cyt, ICC/IF or IP
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human
<b>Immunogen</b>	Synthetic peptide (the amino acid sequence is considered to be commercially sensitive) corresponding to Human Raptor (C terminal).
<b>Positive control</b>	Normal human colon and Human cardiac muscle; mouse and rat brain tissue lysate HEK-293, HeLa, MCF-7 and A431 cell lysate;
<b>General notes</b>	This product is a recombinant rabbit monoclonal antibody.

Our RabMAB<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to [RabMab<sup>®</sup> patents](#)

**We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.**

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 40% Glycerol, 0.05% BSA, 59% PBS
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EP539Y

Isotype

IgG

## Applications

Our [Abpromise guarantee](#) covers the use of **ab40768** 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	★★★★★	1/1000 - 1/5000. Detects a band of approximately 140 kDa (predicted molecular weight: 149 kDa). <b>For unpurified use at 1/500.</b>
IHC-P		1/100. See protocols (link: <a href="http://www.abcam.com/protocols/ihc-antigen-retrieval-protocol">http://www.abcam.com/protocols/ihc-antigen-retrieval-protocol</a> ).

## Application notes

Is unsuitable for Flow Cyt, ICC/IF or IP.

## Target

### Function

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.

### Tissue specificity

Highly expressed in skeletal muscle, and in a lesser extent in brain, lung, small intestine, kidney and placenta.

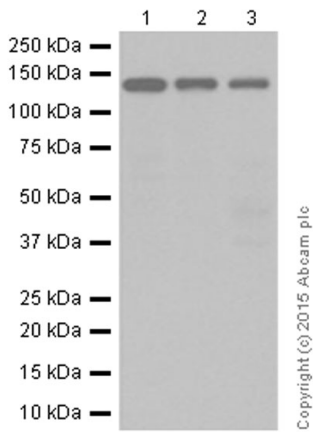
### Sequence similarities

Belongs to the WD repeat RAPTOR family.  
Contains 7 WD repeats.

### Cellular localization

Cytoplasm. Lysosome. Targeting to lysosomes depends on amino acid availability.

## Images



Western blot - Anti-Raptor antibody [EP539Y] (ab40768)

**All lanes :** Anti-Raptor antibody [EP539Y] (ab40768) at 1/5000 dilution

**Lane 1 :** HEK-293 (human embryonic kidney) whole cell lysate

**Lane 2 :** HeLa (human cervix adenocarcinoma) whole cell lysate

**Lane 3 :** MCF-7 (human breast carcinoma) whole cell lysate

Lysates/proteins at 20 µg per lane.

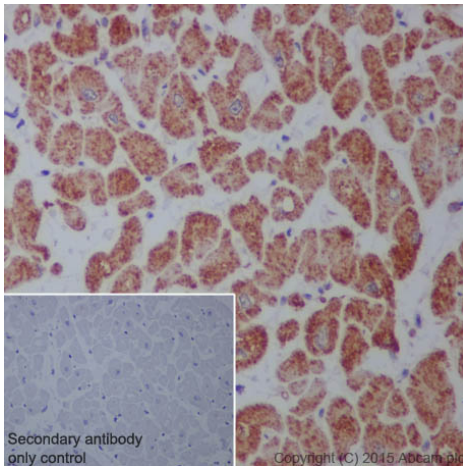
**Secondary**

Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

**Predicted band size :** 149 kDa

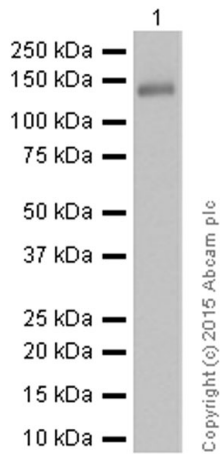
**Observed band size :** 140 kDa

Blocking/Diluting buffer 5% NFDM /TBST



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Raptor antibody [EP539Y] (ab40768)

Immunohistochemical analysis of paraffin-embedded human cardiac muscle sections labelling Raptor with purified ab40768 at dilution of 1/100. The secondary antibody used was ab97051; a goat anti-rabbit IgG H&L (HRP) at dilution of 1/500. The sample was counterstained with hematoxylin. Antigen retrieval was performed using EDTA Buffer; pH 9.0. PBS was used instead of the primary antibody as the negative control and is shown in the inset.



Western blot - Anti-Raptor antibody [EP539Y]  
(ab40768)

Anti-Raptor antibody [EP539Y] (ab40768) at  
1/5000 dilution + Rat brain tissue lysate at 20  
mg/ml

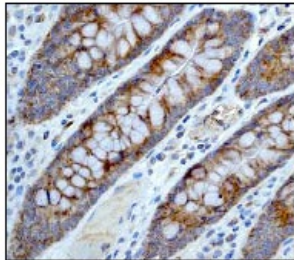
**Secondary**

Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at  
1/20000 dilution

**Predicted band size :** 149 kDa

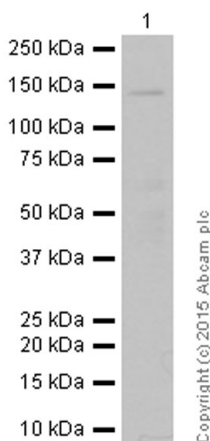
**Observed band size :** 140 kDa

Blocking/Diluting buffer 5% NFDM /TBST



Immunohistochemistry (Paraffin-embedded sections)  
- Raptor antibody [EP539Y] (ab40768)

Immunohistochemical analysis of paraffin-  
embedded human colon using anti-Raptor  
ab40768 at 1/50  
dilution. Immunohistochemical analysis of  
paraffin-embedded human colon using anti-  
Raptor ab40768 at 1/50 dilution.



Western blot - Anti-Raptor antibody [EP539Y]  
(ab40768)

Anti-Raptor antibody [EP539Y] (ab40768) at  
1/1000 dilution + Mouse brain tissue lysate at  
10 µg

**Secondary**

Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at  
1/20000 dilution

**Predicted band size :** 149 kDa

**Observed band size :** 140 kDa

Blocking/Diluting buffer 5% NFDM /TBST



Western blot - Raptor antibody [EP539Y] (ab40768)

**All lanes :** Anti-Raptor antibody [EP539Y]  
(ab40768) at 1/500 dilution

**Lane 1 :** 293 cell lysate

**Lane 2 :** MCF-7 cell lysate

**Lane 3 :** HeLa cell lysate

**Lane 4 :** A431 cell lysate

Lysates/proteins at 10 µg per lane.

**Predicted band size :** 149 kDa

**Observed band size :** 140 kDa

**Additional bands at :** 21 kDa, 37 kDa. We are unsure as to the identity of these extra bands.

**Please note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

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