

## Product datasheet

# Anti-Tuberin (phospho S664) antibody [EPR8202] ab133465

Recombinant RabMAb

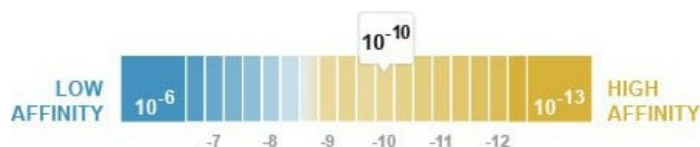
[5 References](#) [6 Images](#)

### Overview

<b>Product name</b>	Anti-Tuberin (phospho S664) antibody [EPR8202]
<b>Description</b>	Rabbit monoclonal [EPR8202] to Tuberin (phospho S664)
<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: SH-SY5Y cell lysates treated with Okadaic acid and Calyculin A and HeLa treated with 200nM Phorbol-12-myristate-13-acetate (PMA) for 4 hours whole cell lysate unboiled, Human, mouse and rat brain tissue lysate unboiled
<b>General notes</b>	<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

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
<b>Dissociation constant (K<sub>D</sub>)</b>	K <sub>D</sub> = 2.12 x 10 <sup>-10</sup> M



[Learn more about K<sub>D</sub>](#)

<b>Storage buffer</b>	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR8202
<b>Isotype</b>	IgG

## Applications

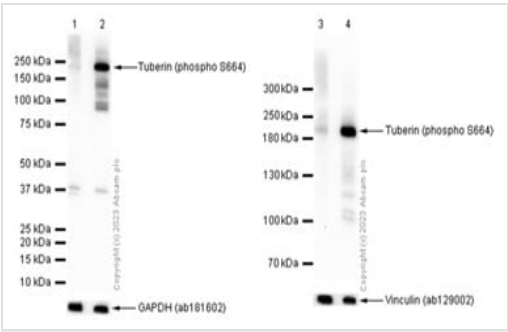
**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab133465 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/1000 - 1/10000. Predicted molecular weight: 201 kDa.

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

## Target

<b>Function</b>	In complex with TSC1, inhibits the nutrient-mediated or growth factor-stimulated phosphorylation of S6K1 and EIF4EBP1 by negatively regulating mTORC1 signaling. Acts as a GTPase-activating protein (GAP) for the small GTPase RHEB, a direct activator of the protein kinase activity of mTORC1. Implicated as a tumor suppressor. Involved in microtubule-mediated protein transport, but this seems to be due to unregulated mTOR signaling. Stimulates weakly the intrinsic GTPase activity of the Ras-related proteins RAP1A and RAB5 in vitro. Mutations in TSC2 lead to constitutive activation of RAP1A in tumors.
<b>Tissue specificity</b>	Liver, brain, heart, lymphocytes, fibroblasts, biliary epithelium, pancreas, skeletal muscle, kidney, lung and placenta.
<b>Involvement in disease</b>	<p>Defects in TSC2 are the cause of tuberous sclerosis type 2 (TSC2) [MIM:613254]. TSC2 is an autosomal dominant multi-system disorder that affects especially the brain, kidneys, heart, and skin. It is characterized by hamartomas (benign overgrowths predominantly of a cell or tissue type that occurs normally in the organ) and hamartias (developmental abnormalities of tissue combination). Clinical symptoms can range from benign hypopigmented macules of the skin to profound mental retardation with intractable seizures to premature death from a variety of disease-associated causes.</p> <p>Defects in TSC2 are a cause of lymphangioleiomyomatosis (LAM) [MIM:606690]. LAM is a progressive and often fatal lung disease characterized by a diffuse proliferation of abnormal smooth muscle cells in the lungs. It affects almost exclusively young women and can occur as an isolated disorder or in association with tuberous sclerosis complex.</p>
<b>Sequence similarities</b>	Contains 1 Rap-GAP domain.
<b>Post-translational modifications</b>	Phosphorylation at Ser-1387, Ser-1418 or Ser-1420 does not affect interaction with TSC1. Phosphorylation at Ser-939 and Thr-1462 by PKB/AKT1 is induced by growth factor stimulation.
<b>Cellular localization</b>	Cytoplasm. Membrane. At steady state found in association with membranes.



Western blot - Anti-Tuberin (phospho S664) antibody [EPR8202] (ab133465)

**All lanes :** Anti-Tuberin (phospho S664) antibody [EPR8202] (ab133465) at 1/1000 dilution

- Lane 1 :** Mouse brain lysate boiled
- Lane 2 :** Mouse brain lysate unboiled
- Lane 3 :** Rat brain lysate boiled
- Lane 4 :** Rat brain lysate unboiled

Lysates/proteins at 15 µg per lane.

**Secondary**

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

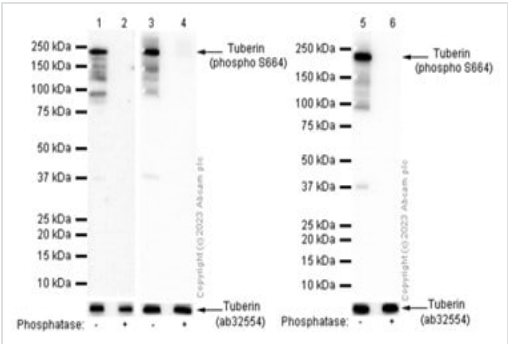
**Predicted band size:** 201 kDa  
**Observed band size:** 200 kDa

**Exposure time:** 40 seconds

Blocking/Diluting buffer and concentration 5% NFDM/TBST

We recommend not to boil the samples after lysis to get desired WB results.

The molecular weight observed is consistent with what has been described in the literature (PMID:30774414; 10335945).



Western blot - Anti-Tuberin (phospho S664) antibody [EPR8202] (ab133465)

**All lanes :** Anti-Tuberin (phospho S664) antibody [EPR8202] (ab133465) at 1/1000 dilution

- Lane 1 :** Human brain lysate unboiled
- Lane 2 :** Human brain lysate unboiled, then the membrane treated with Alkaline Phosphatase for 1 hour
- Lane 3 :** Rat brain lysate unboiled
- Lane 4 :** Rat brain lysate unboiled, then the membrane treated with Alkaline Phosphatase for 1 hour
- Lane 5 :** Mouse brain lysate unboiled
- Lane 6 :** Mouse brain lysate unboiled, then the membrane treated with Alkaline Phosphatase for 1 hour

Lysates/proteins at 15 µg per lane.

### Secondary

**All lanes** : Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

**Predicted band size:** 201 kDa

**Observed band size:** 200 kDa

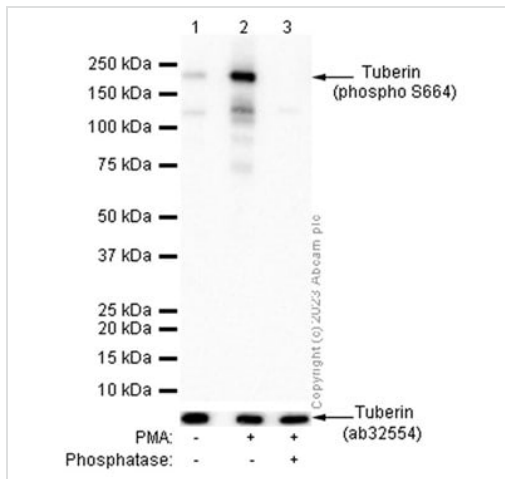
Blocking/Diluting buffer and concentration 5% NFDM/TBST

Exposure time:

Lane 1, 2: 180 seconds

Lane 3, 4: 40 seconds

Lane 5, 6: 20 seconds



Western blot - Anti-Tuberin (phospho S664) antibody [EPR8202] (ab133465)

**All lanes** : Anti-Tuberin (phospho S664) antibody [EPR8202] (ab133465) at 1/1000 dilution

**Lane 1** : Untreated HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate unboiled

**Lane 2** : HeLa treated with 200nM Phorbol-12-myristate-13-acetate (PMA) for 4 hours whole cell lysate unboiled

**Lane 3** : HeLa treated with 200nM Phorbol-12-myristate-13-acetate (PMA) for 4 hours whole cell lysate unboiled, then the membrane treated with Alkaline Phosphatase for 1 hour

Lysates/proteins at 15 µg per lane.

### Secondary

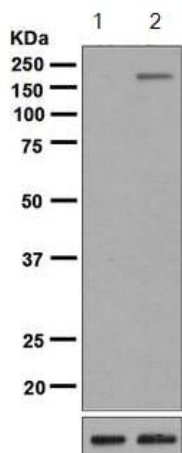
**All lanes** : Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

**Predicted band size:** 201 kDa

**Observed band size:** 200 kDa

**Exposure time:** 80 seconds

Blocking/Diluting buffer and concentration 5% NFDM/TBST



Western blot - Anti-Tuberin (phospho S664) antibody [EPR8202] (ab133465)

**All lanes** : Anti-Tuberin (phospho S664) antibody [EPR8202] (ab133465) at 1/1000 dilution

**Lane 1** : SH SY5Y cell lysates

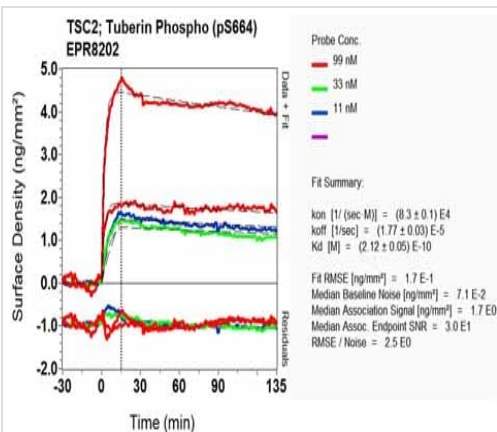
**Lane 2** : SH SY5Y cell lysates treated with Okadaic acid and Calyculin A

Lysates/proteins at 10 µg per lane.

### Secondary

**All lanes** : HRP labelled goat anti-rabbit at 1/2000 dilution

**Predicted band size:** 201 kDa



OI-RD Scanning - Anti-Tuberin (phospho S664) antibody [EPR8202] (ab133465)

Equilibrium disassociation constant ( $K_D$ )

Learn more about  $K_D$

[Click here to learn more about  \$K\_D\$](#)

### Why choose a recombinant antibody?



**Research with confidence**  
 Consistent and reproducible results



**Long-term and scalable supply**  
 Recombinant technology



**Success from the first experiment**  
 Confirmed specificity



**Ethical standards compliant**  
 Animal-free production

Anti-Tuberin (phospho S664) antibody [EPR8202] (ab133465)

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

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