

Product datasheet

Anti-Tuberin (phospho S1254) antibody [EPR5682] ab133454

Recombinant RabMAb

[4 Images](#)

Overview

Product name	Anti-Tuberin (phospho S1254) antibody [EPR5682]
Description	Rabbit monoclonal [EPR5682] to Tuberin (phospho S1254)
Host species	Rabbit
Specificity	ab133454 detects Tuberin only when phosphorylated at Serine 1254.
Tested applications	Suitable for: WB, IHC-P Unsuitable for: Flow Cyt or ICC
Species reactivity	Reacts with: Human
Immunogen	Phospho specific synthetic peptide corresponding to residues surrounding Serine 1254 of Human Tuberin. (P49815).
Positive control	SH-SY5Y cell lysate; Human breast carcinoma tissue
General notes	Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

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](#).

Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.

Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.

We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise[™] guarantee.

In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.

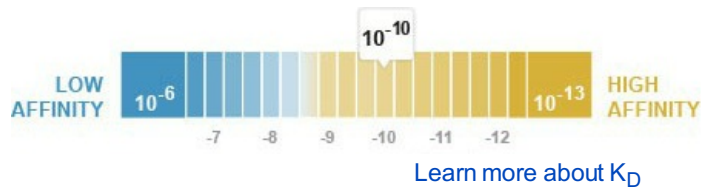
We are also updating the applications & species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, as well as customer reviews and Q&As.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Dissociation constant (K_D)	K _D = 2.03 x 10 ⁻¹⁰ M



Storage buffer	pH: 7.2 Preservative: 0.05% Sodium azide Constituents: 40% Glycerol (glycerin, glycerine), 9.85% Tris glycine, 50% Tissue culture supernatant
Purity	Tissue culture supernatant
Clonality	Monoclonal
Clone number	EPR5682
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab133454** 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		1/10000 - 1/50000. Detects a band of approximately 180 kDa (predicted molecular weight: 201 kDa).
IHC-P		1/50 - 1/100. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Application notes	Is unsuitable for Flow Cyt or ICC.
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Target

Function

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.

Tissue specificity

Liver, brain, heart, lymphocytes, fibroblasts, biliary epithelium, pancreas, skeletal muscle, kidney, lung and placenta.

Involvement in disease

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.

Defects in TSC2 are a cause of lymphangioliomyomatosis (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.

Sequence similarities

Contains 1 Rap-GAP domain.

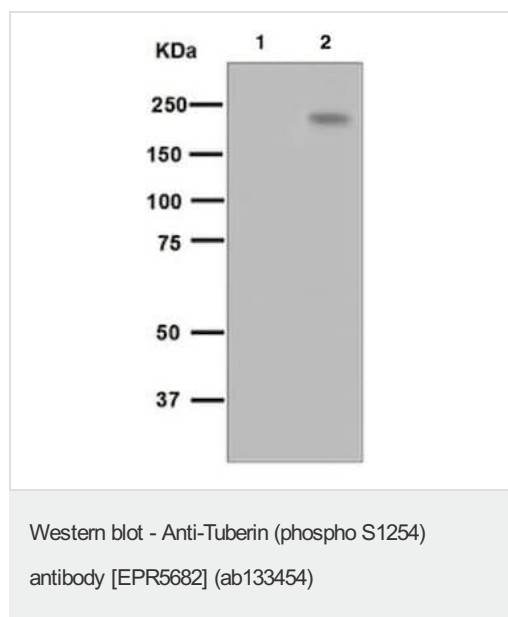
Post-translational modifications

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.

Cellular localization

Cytoplasm. Membrane. At steady state found in association with membranes.

Images



All lanes : Anti-Tuberin (phospho S1254) antibody [EPR5682] (ab133454) at 1/10000 dilution

Lane 1 : SH-SY5Y cell lysate

Lane 2 : SH-SY5Y cell lysate treated with Okadaic Acid and Calyculin A

Lysates/proteins at 10 µg per lane.

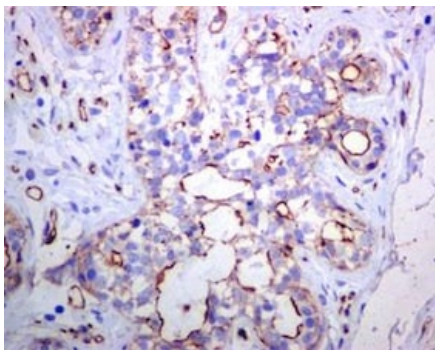
Secondary

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

Predicted band size: 201 kDa

Observed band size: 180 kDa

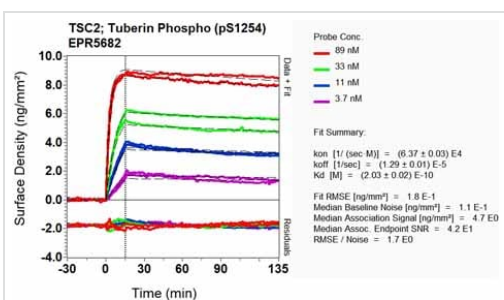
[why is the actual band size different from the predicted?](#)



Immunohistochemical analysis of paraffin embedded Human breast carcinoma tissue labelling Tuberin Phospho S1254 with ab133454 at 1/50 dilution

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Tuberin (phospho S1254) antibody [EPR5682] (ab133454)



Equilibrium dissociation constant (K_D)

Learn more about K_D

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

OL-RD Scanning - Anti-Tuberin (phospho S1254) antibody [EPR5682] (ab133454)

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

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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
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- 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

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