

Product datasheet

Anti-TORC1 antibody [EPR3381(2)] ab109736

Recombinant RabMAb

3 Images

Overview

| | |
|----------------------------|---|
| Product name | Anti-TORC1 antibody [EPR3381(2)] |
| Description | Rabbit monoclonal [EPR3381(2)] to TORC1 |
| Host species | Rabbit |
| Tested applications | Suitable for: WB, IHC-P Unsuitable for: Flow Cyt, ICC or IP |
| Species reactivity | Reacts with: Human |
| Immunogen | Synthetic peptide within Human TORC1 aa 400-500. The exact sequence is proprietary. |
| Positive control | 293T, Human fetal brain, and HeLa lysates; Human brain 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. |
| Storage buffer | pH: 7.20 Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 40% Glycerol (glycerin, glycerine), 9.85% Tris glycine, 50% Tissue culture supernatant |
| Purity | Tissue culture supernatant |
| Clonality | Monoclonal |
| Clone number | EPR3381(2) |
| Isotype | IgG |

Applications

Our [Abpromise guarantee](#) covers the use of **ab109736** 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: 67 kDa. |
| IHC-P | | 1/50 - 1/100. Perform heat mediated antigen retrieval via the pressure cooker method before commencing with IHC staining protocol. |

Application notes Is unsuitable for Flow Cyt, ICC or IP.

Target

Function Transcriptional coactivator for CREB1 which activates transcription through both consensus and variant cAMP response element (CRE) sites. Acts as a coactivator, in the SIK/TORC signaling pathway, being active when dephosphorylated and acts independently of CREB1 'Ser-133' phosphorylation. Enhances the interaction of CREB1 with TAF4. Regulates the expression of specific CREB-activated genes such as the steroidogenic gene, StAR. Potent coactivator of PGC1alpha and inducer of mitochondrial biogenesis in muscle cells. Also coactivator for TAX activation of the human T-cell leukemia virus type 1 (HTLV-1) long terminal repeats (LTR). In the hippocampus, involved in late-phase long-term potentiation (L-LTP) maintenance at the Schaffer collateral-CA1 synapses. May be required for dendritic growth of developing cortical neurons (By

similarity). In concert with SIK1, regulates the light-induced entrainment of the circadian clock. In response to light stimulus, coactivates the CREB-mediated transcription of PER1 which plays an important role in the photic entrainment of the circadian clock.

Tissue specificity

Highly expressed in adult and fetal brain. Located to specific regions such as the prefrontal cortex and cerebellum. Very low expression in other tissues such as heart, spleen, lung, skeletal muscle, salivary gland, ovary and kidney.

Involvement in disease

A chromosomal aberration involving CRTC1 is found in mucoepidermoid carcinomas, benign Warthin tumors and clear cell hidradenomas. Translocation t(11;19)(q21;p13) with MAML2. The fusion protein consists of the N-terminus of CRTC1 joined to the C-terminus of MAML2. The reciprocal fusion protein consisting of the N-terminus of MAML2 joined to the C-terminus of CRTC1 has been detected in a small number of mucoepidermoid carcinomas.

Sequence similarities

Belongs to the TORC family.

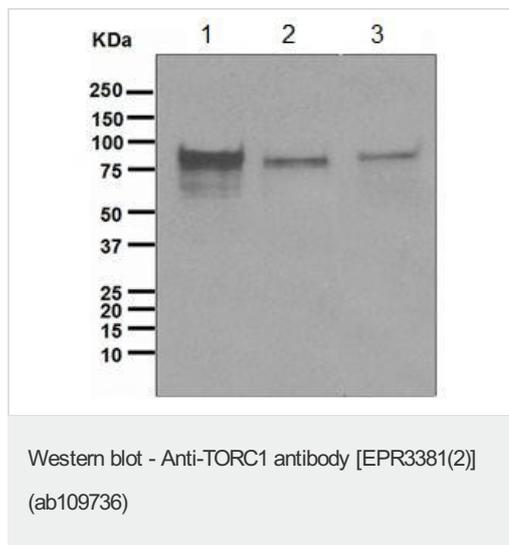
Post-translational modifications

Phosphorylation/dephosphorylation states of Ser-151 are required for regulating transduction of CREB activity. TORCs are inactive when phosphorylated, and active when dephosphorylated at this site. This primary site of phosphorylation is mediated by SIKs (SIK1 and SIK2), is regulated by cAMP and calcium levels and is dependent on the phosphorylation of SIKs by LKB1.

Cellular localization

Cytoplasm. Nucleus. Cytoplasmic when phosphorylated by SIK or AMPK and when sequestered by 14-3-3 proteins (PubMed:16817901). Translocated to the nucleus on Ser-151 dephosphorylation, instigated by a number of factors including calcium ion and cAMP levels (PubMed:15589160). Light stimulation triggers a nuclear accumulation in the suprachiasmatic nucleus (SCN) of the brain (By similarity).

Images



All lanes : Anti-TORC1 antibody [EPR3381(2)] (ab109736) at 1/1000 dilution

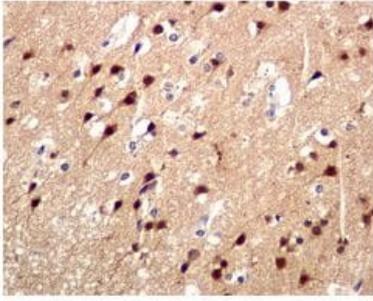
Lane 1 : 293T cell lysate

Lane 2 : Human fetal brain lysate

Lane 3 : HeLa cell lysate

Lysates/proteins at 10 µg per lane.

Predicted band size: 67 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TORC1 antibody [EPR3381(2)] (ab109736)

ab109736 at 1/50 dilution staining MECT1 in paraffin-embedded Human brain tissue by Immunohistochemistry.

Perform heat mediated antigen retrieval via the pressure cooker method before commencing with IHC staining protocol.

Why choose a recombinant antibody?



Anti-TORC1 antibody [EPR3381(2)] (ab109736)

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

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