abcam

Product datasheet

Anti-CPEB1 antibody ab3465

1 Abreviews 6 References 8 图像

概述

产品名称	Anti-CPEB1抗体
描述	**兔多克隆抗体**to CPEB1
宿主	Rabbit
经测试应用	**适用于:** IHC-P, ICC/IF, WB
种属反应性	**与反应:** Mouse, Rat, Human **预测可用于:** Xenopus laevis
免疫原	Synthetic peptide corresponding to Human CPEB1 aa 545-562. Sequence: HSMEGLRHHSPLMRNQKN (Peptide available as **ab4988**) Run BLAST with Run BLAST with
常规说明	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. 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, along with publications, customer reviews and Q&As

性能

形式	Liquid
存放说明	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
存储溶液	Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 99% PBS
纯度	Immunogen affinity purified
克隆	**多克隆**
同种型	IgG

应用

The Abpromise guarantee **Abpromise™承诺保证使用ab3465于以下的经测试应用**

"应用说明"部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
IHC-P		1/50 - 1/500.
ICC/IF	★★★★☆ (1)	1/50 - 1/500.
WB		Use a concentration of 1 µg/ml. Detects a band of approximately 65 kDa (predicted molecular weight: 65 kDa).

靶标

功能

Sequence-specific RNA-binding protein that regulates mRNA cytoplasmic polyadenylation and translation initiation during oocyte maturation, early development and at postsynapse sites of neurons. Binds to the cytoplasmic polyadenylation element (CPE), an uridine-rich sequence element (consensus sequence 5'-UUUUUAU-3') within the mRNA 3'-UTR. In absence of phosphorylation and in association with TACC3 is also involved as a repressor of translation of CPE-containing mRNA; a repression that is relieved by phosphorylation or degradation (By similarity). Involved in the transport of CPE-containing mRNA to dendrites; those mRNAs may be transported to dendrites in a translationally dormant form and translationally activated at synapses (By similarity). Its interaction with APLP1 promotes local CPE-containing mRNA polyadenylation and translation activation (By similarity). Induces the assembly of stress granules in the absence of stress.

组织特异性

Isoform 1 is expressed in immature oocytes, ovary, brain and heart. Isoform 2 is expressed in brain and heart. Isoform 3 and isoform 4 are expressed in brain. Expressed in breast tumors and several tumor cell lines.

序列相似性

Belongs to the RRM CPEB family.
Contains 2 RRM (RNA recognition motif) domains.

结构域

The 2 RRM domains and the C-terminal region mediate interaction with CPE-containing RNA.

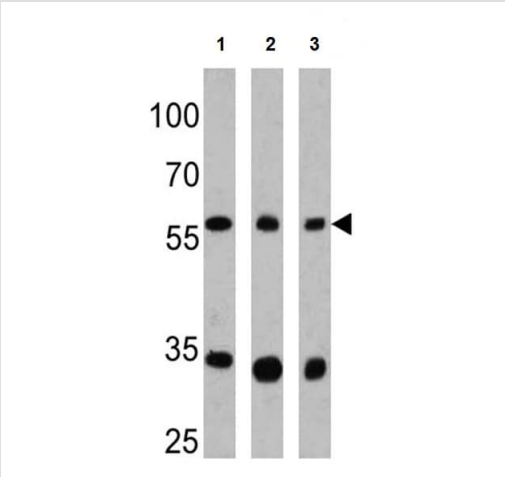
翻译后修饰

Phosphorylated on serine/threonine residues by AURKA/STK6 within positions 166 and 197. Phosphorylation and dephosphorylation on Thr-172 regulates cytoplasmic polyadenylation and translation of CPE-containing mRNAs. Phosphorylation on Thr-172 by AURKA/STK6 and CAMK2A activates CPEB1. Phosphorylation on Thr-172 may be promoted by APLP1. Phosphorylation increases binding to RNA.

细胞定位

Cytoplasm > P-body. Cytoplasmic granule. Cell junction > synapse. Membrane. Cell junction > synapse > postsynaptic cell membrane > postsynaptic density. Cell projection > dendrite. Also found in stress granules. Recruited to stress granules (SGs) upon arsenite treatment. In dendrites (By similarity). Localizes in synaptosomes at dendritic synapses of neurons (By similarity). Strongly enriched in postsynaptic density (PSD) fractions (By similarity). Transported into dendrites in a microtubule-dependent fashion and colocalizes in mRNA-containing particles with TACC3, dynein and kinesin (By similarity). Membrane-associated (By similarity). Colocalizes at excitatory synapses with members of the polyadenylation and translation complex factors (CPSF, APLP1, TACC3, AURKA/STK6, SYP, etc.) including CPE-containing RNAs.

图片



Western blot - Anti-CPEB1 antibody (ab3465)

All lanes : Anti-CPEB1 antibody (ab3465) at 1/500 dilution

Lane 1 : HeLa lysate
Lane 2 : Human brain tissue lysate
Lane 3 : Mouse brain tissue lysate

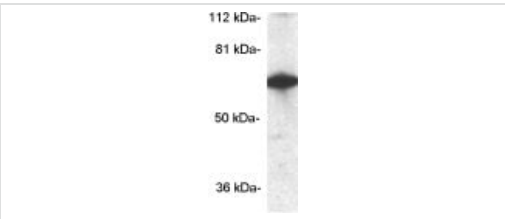
Lysates/proteins at 25 µg per lane.

Secondary
All lanes : HRP-conjugated anti-rabbit

Developed using the ECL technique.

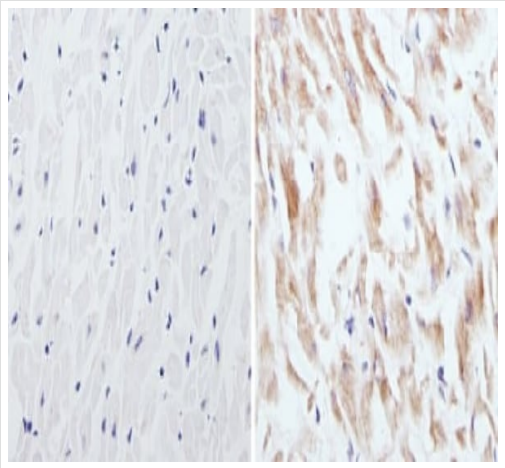
Predicted band size: 65 kDa
Observed band size: 62 kDa

Exposure time: 1 minute



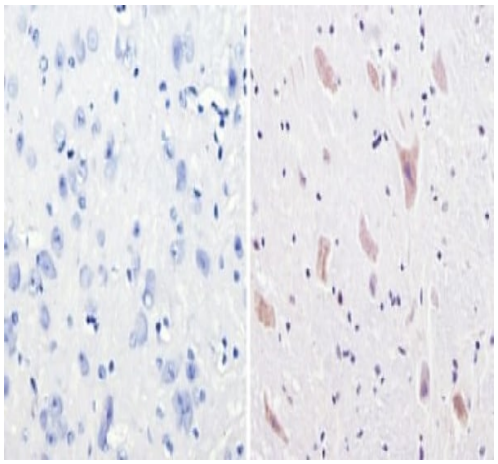
Western blot - Anti-CPEB1 antibody (ab3465)

Western blot detection of 1.0 ng of recombinant mouse CPEB1 using ab3465.



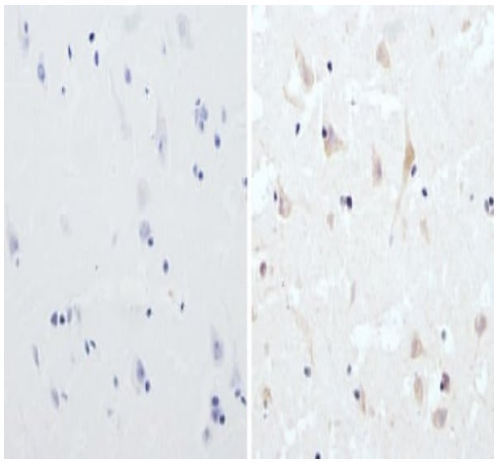
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CPEB1 antibody (ab3465)

Immunohistochemistry analysis of CPEB showing staining in the cytoplasm of paraffin-embedded human hearat tissue (right) compared to a negative control without primary antibody (left). To expose target proteins, antigen retrieval was performed using 10 mM sodium citrate (pH 6.0), microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H_2O_2-methanol for 15 min at room temperature, washed with ddH_2O and PBS, and then probed with ab3465 diluted in 3% BSA-PBS at a dilution of 1/50 overnight at 4°C in a humidified chamber. Tissues were washed extensively in PBST and detection was performed using an HRP-conjugated secondary antibody followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.



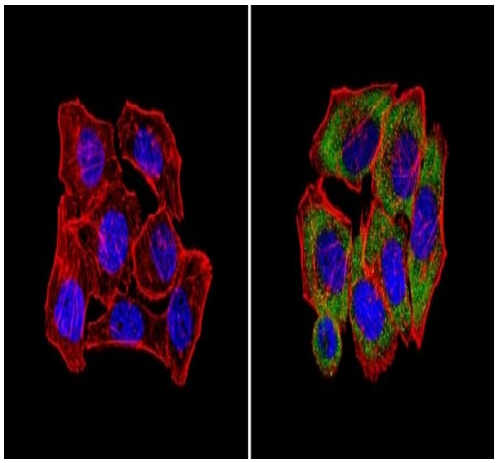
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CPEB1 antibody (ab3465)

Immunohistochemistry analysis of CPEB showing staining in the cytoplasm of paraffin-embedded mouse brain tissue (right) compared to a negative control without primary antibody (left). To expose target proteins, antigen retrieval was performed using 10 mM sodium citrate (pH 6.0), microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H_2O_2-methanol for 15 min at room temperature, washed with ddH_2O and PBS, and then probed with ab3465 diluted in 3% BSA-PBS at a dilution of 1/200 overnight at 4°C in a humidified chamber. Tissues were washed extensively in PBST and detection was performed using an HRP-conjugated secondary antibody followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.



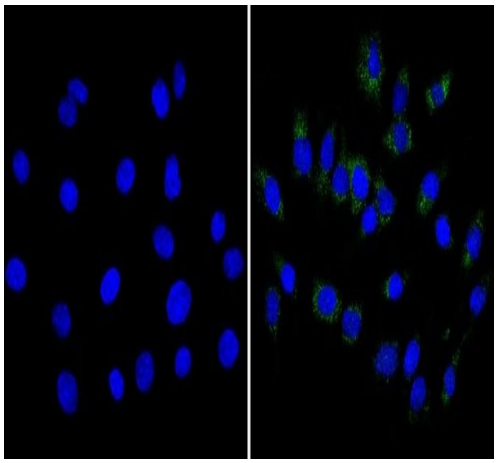
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CPEB1 antibody (ab3465)

Immunohistochemistry analysis of CPEB showing staining in the cytoplasm of paraffin-embedded human brain tissue (right) compared to a negative control without primary antibody (left). To expose target proteins, antigen retrieval was performed using 10 mM sodium citrate (pH 6.0), microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H_2O_2-methanol for 15 min at room temperature, washed with ddH_2O and PBS, and then probed with ab3465 diluted in 3% BSA-PBS at a dilution of 1/100 overnight at 4°C in a humidified chamber. Tissues were washed extensively in PBST and detection was performed using an HRP-conjugated secondary antibody followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.



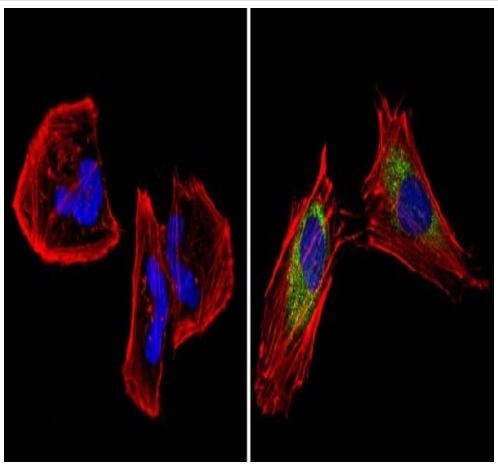
Immunocytochemistry/ Immunofluorescence - Anti-CPEB1 antibody (ab3465)

Immunofluorescent analysis of CPEB (green) showing staining in the cytoplasm of U251 cells (right) compared to a negative control without primary antibody (left). Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with ab3465 in 3% BSA-PBS at a dilution of 1/100 and incubated overnight at 4°C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight®-conjugated secondary antibody in PBS at room temperature in the dark. Actin was stained using Alexa Fluor® 554 (red) and nuclei were stained with Hoechst or DAPI (blue). Images were taken at a magnification of 60x.



Immunocytochemistry/ Immunofluorescence - Anti-CPEB1 antibody (ab3465)

Immunofluorescent analysis of CPEB (green) showing staining in the cytoplasm of C6 cells (right) compared to a negative control without primary antibody (left). Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with ab3465 in 3% BSA-PBS at a dilution of 1/100 and incubated overnight at 4°C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight®-conjugated secondary antibody in PBS at room temperature in the dark. Nuclei were stained with Hoechst or DAPI (blue). Images were taken at a magnification of 60x.



Immunocytochemistry/ Immunofluorescence - Anti-CPEB1 antibody (ab3465)

Immunofluorescent analysis of CPEB (green) showing staining in the cytoplasm of HeLa cells (right) compared to a negative control without primary antibody (left). Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with ab3465 in 3% BSA-PBS at a dilution of 1/100 and incubated overnight at 4°C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight®-conjugated secondary antibody in PBS at room temperature in the dark. Actin was stained using Alexa Fluor® 554 (red) and nuclei were stained with Hoechst or DAPI (blue). Images were taken at a magnification of 60x.

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.cn/abpromise** or contact our technical team.

Terms and conditions

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