

CPEB1 Antibody (C-term)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP16631b**Specification**

CPEB1 Antibody (C-term) - Product Information

Application	WB,E
Primary Accession	Q9BZB8
Other Accession	P0C279 , P70166 , Q9YGX5 , Q52KN7 , Q91572 , NP_001073001.1 , NP_001073002.1
Reactivity	Human
Predicted	Xenopus, Zebrafish, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	62595
Antigen Region	447-475

CPEB1 Antibody (C-term) - Additional Information**Gene ID** 64506**Other Names**

Cytoplasmic polyadenylation element-binding protein 1, CPE-BP1, CPE-binding protein 1, h-CEBP, hCPEB-1, CPEB1, CPEB

Target/Specificity

This CPEB1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 447-475 amino acids from the C-terminal region of human CPEB1.

Dilution

WB~~1:1000

E~~Use at an assay dependent concentration.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

CPEB1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

CPEB1 Antibody (C-term) - Protein Information

Name CPEB1

Synonyms CPEB

Function 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. RNA binding results in a clear conformational change analogous to the Venus fly trap mechanism (PubMed:[24990967](#)). 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. Required for cell cycle progression, specifically for prophase entry (PubMed:[26398195](#)).

Cellular Location

Cytoplasm. Nucleus Cytoplasm, P-body. Cytoplasmic granule. Synapse. Membrane. Postsynaptic density. Cell projection, dendrite Note=Continuously shuttling between nucleus and cytoplasm (PubMed:[18923137](#)). 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, SYP, etc.) including CPE-containing RNAs (By similarity). {ECO:0000250, ECO:0000269|PubMed:[18923137](#)}

Tissue Location

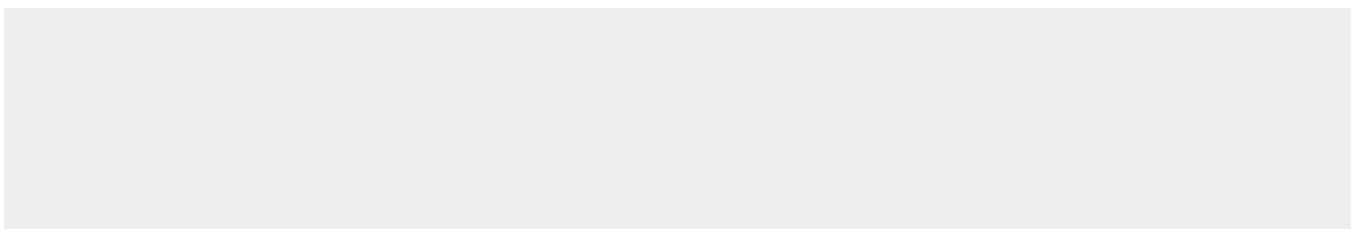
Isoform 1 is expressed in immature oocytes, ovary, brain and heart. Isoform 2 is expressed in brain and heart. Isoform 3 and isoform 4 are expressed in brain. Expressed in breast tumors and several tumor cell lines.

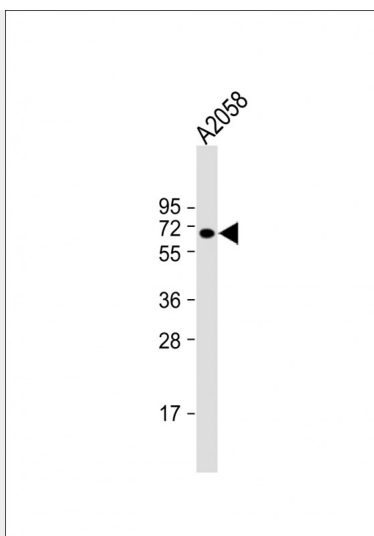
CPEB1 Antibody (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

CPEB1 Antibody (C-term) - Images





Anti-CPEB1 Antibody (C-term) at 1:1000 dilution + A2058 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 63 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

CPEB1 Antibody (C-term) - Background

This gene encodes a member of the cytoplasmic polyadenylation element (CPE) binding protein family. This highly conserved protein binds to a specific RNA sequence called the CPE found in the 3' UTR of some mRNAs. Similar proteins in *Xenopus* and mouse function to induce cytoplasmic polyadenylation of dormant mRNAs with short polyA tails, resulting in their translation. Members of this protein family regulate translation of cyclin B1 during embryonic cell divisions. Multiple transcript variants encoding different isoforms have been found for this gene.

CPEB1 Antibody (C-term) - References

Glahder, J.A., et al. *Virus Res.* 149(2):217-223(2010)
Crowther-Swanepoel, D., et al. *Nat. Genet.* 42(2):132-136(2010)
Hansen, C.N., et al. *APMIS* 117(1):53-59(2009)
Ernault-Lange, M., et al. *Mol. Biol. Cell* 20(1):176-187(2009)
Burns, D.M., et al. *Genes Dev.* 22(24):3449-3460(2008)