

**Goat Anti-CPEB1 Antibody**  
**Peptide-affinity purified goat antibody**  
**Catalog # AF1273a****Specification**

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**Goat Anti-CPEB1 Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">O9BZB8</a>
Other Accession	<a href="#">NP_001073003</a> , <a href="#">64506</a>
Reactivity	Human
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	62595

**Goat Anti-CPEB1 Antibody - 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

**Format**

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Goat Anti-CPEB1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Goat Anti-CPEB1 Antibody - 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:<a href="http://www.uniprot.org/citations/24990967" target="\_blank">24990967</a>). 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:<a href="http://www.uniprot.org/citations/26398195" target="\_blank">26398195</a>).

#### **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**

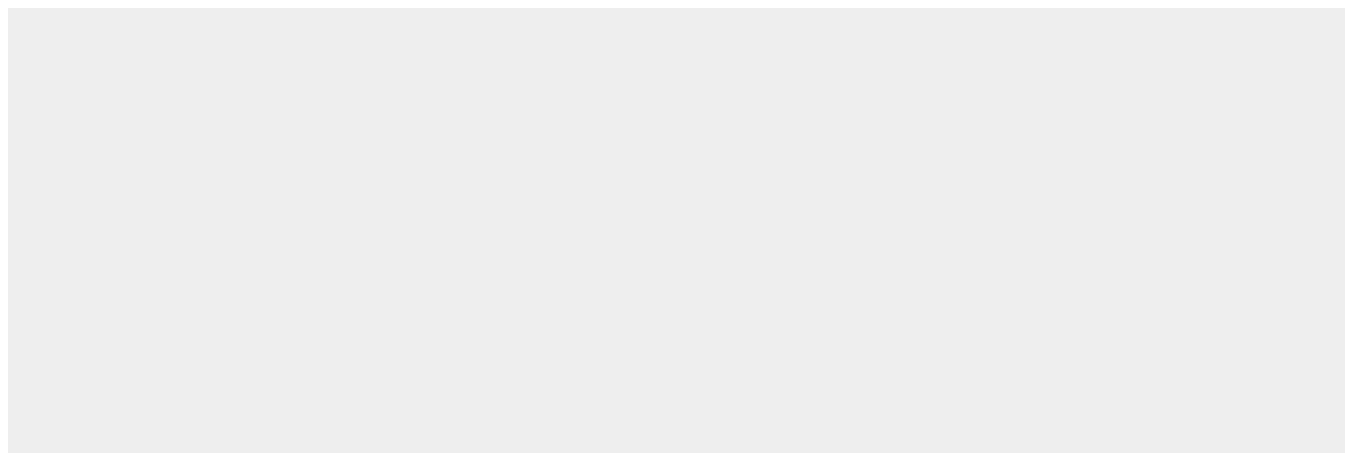
Isoform 1 is expressed in immature oocytes, ovary, brain and heart. Isoform 2 is expressed in brain and heart. Isoform 3 and isoform 4 are expressed in brain. Expressed in breast tumors and several tumor cell lines.

### **Goat Anti-CPEB1 Antibody - 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](#)

### **Goat Anti-CPEB1 Antibody - Images**





AF1273a staining (0.5 µg/ml) of human brain lysate (RIPA buffer, 35 µg total protein per lane). Primary incubated for 1 hour. Detected by western blot using chemiluminescence.

### **Goat Anti-CPEB1 Antibody - 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.

### **Goat Anti-CPEB1 Antibody - References**

The early noncoding region of human papillomavirus type 16 is regulated by cytoplasmic polyadenylation factors. Glahder JA, et al. *Virus Res*, 2010 May. PMID 20144904.  
Common variants at 2q37.3, 8q24.21, 15q21.3 and 16q24.1 influence chronic lymphocytic leukemia risk. Crowther-Swanepoel D, et al. *Nat Genet*, 2010 Feb. PMID 20062064.  
Expression of CPEB, GAPDH and U6snRNA in cervical and ovarian tissue during cancer development. Hansen CN, et al. *APMIS*, 2009 Jan. PMID 19161537.  
CPEB regulation of human cellular senescence, energy metabolism, and p53 mRNA translation. Burns DM, et al. *Genes Dev*, 2008 Dec 15. PMID 19141477.  
Nucleocytoplasmic traffic of CPEB1 and accumulation in Crm1 nucleolar bodies. Ernoult-Lange M, et al. *Mol Biol Cell*, 2009 Jan. PMID 18923137.