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CPEB1 Rabbit mAb

Catalog # AP78201

Product Information

Application	WB, IP
Primary Accession	Q9BZB8
Reactivity	Human
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Immunogen	A synthesized peptide derived from human CPEB1
Purification	Affinity Purified
Calculated MW	62595

Additional Information

Gene ID	64506
Other Names	CPEB1
Dilution	WB~~1/500-1/1000 IP~~N/A
Format	Liquid in 10mM PBS, pH 7.4, 150mM sodium chloride, 0.05% BSA, 0.02% sodium azide and 50% glycerol.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

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.

Images