

ARG40606 anti-CPEB3 antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes CPEB3
Tested Reactivity	Hu, Ms, Rat
Tested Application	ICC/IF, IHC-P, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	CPEB3
Species	Human
Immunogen	Recombinant fusion protein corresponding to aa. 150-400 of Human CPEB3 (NP_055727.3).
Conjugation	Un-conjugated
Alternate Names	CPE-binding protein 3; CPE-BP3; Cytoplasmic polyadenylation element-binding protein 3; hCPEB-3

Application Instructions

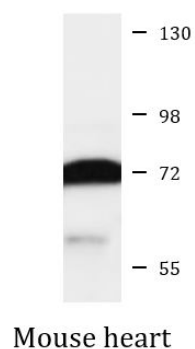
Application table	Application	Dilution
	ICC/IF	1:50 - 1:200
	IHC-P	1:50 - 1:200
	WB	1:200 - 1:2000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Positive Control	Mouse heart	
Observed Size	72 kDa	

Properties

Form	Liquid
Purification	Affinity purified.
Buffer	PBS (pH 7.3), 0.02% Sodium azide and 50% Glycerol.
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Bioinformation

Gene Symbol	CPEB3
Gene Full Name	cytoplasmic polyadenylation element binding protein 3
Function	<p>Sequence-specific RNA-binding protein which acts as a translational repressor in the basal unstimulated state but, following neuronal stimulation, acts as a translational activator (By similarity). In contrast to CPEB1, does not bind to the cytoplasmic polyadenylation element (CPE), a uridine-rich sequence element within the mRNA 3'-UTR, but binds to a U-rich loop within a stem-loop structure (By similarity). Required for the consolidation and maintenance of hippocampal-based long term memory (By similarity). In the basal state, binds to the mRNA 3'-UTR of the glutamate receptors GRIA2/GLUR2 mRNA and negatively regulates their translation (By similarity). Also represses the translation of DLG4, GRIN1, GRIN2A and GRIN2B (By similarity). When activated, acts as a translational activator of GRIA1 and GRIA2 (By similarity). In the basal state, suppresses SUMO2 translation but activates it following neuronal stimulation (By similarity). Binds to the 3'-UTR of TRPV1 mRNA and represses TRPV1 translation which is required to maintain normal thermoception (By similarity). Binds actin mRNA, leading to actin translational repression in the basal state and to translational activation following neuronal stimulation (By similarity). Negatively regulates target mRNA levels by binding to TOB1 which recruits CNOT7/CAF1 to a ternary complex and this leads to target mRNA deadenylation and decay (PubMed:21336257). In addition to its role in translation, binds to and inhibits the transcriptional activation activity of STAT5B without affecting its dimerization or DNA-binding activity. This, in turn, represses transcription of the STAT5B target gene EGFR which has been shown to play a role in enhancing learning and memory performance (PubMed:20639532). In contrast to CPEB1, CPEB2 and CPEB4, not required for cell cycle progression (PubMed:26398195). [UniProt]</p>
Calculated Mw	76 kDa
PTM	<p>Activated by NEURL1-mediated monoubiquitination, resulting in the growth of new dendritic spines and increased levels of GRIA1 and GRIA2. NEURL1-mediated monoubiquitination facilitates synaptic plasticity and hippocampal-dependent memory storage.</p> <p>Under basal unstimulated conditions when CPEB3 is mainly unaggregated, sumoylated and acts as a translational repressor. Following neuronal stimulation, becomes desumoylated and aggregated which is required for the translation of mRNA targets and for dendritic filopodia formation.</p> <p>Following neuronal stimulation, cleaved by CAPN2 which abolishes its translational repressor activity, leading to translation of CPEB3 target mRNAs.</p> <p>Phosphorylation is enhanced by neuronal stimulation. [UniProt]</p>
Cellular Localization	<p>Cytoplasm. Nucleus. Cell junction, synapse. Cell projection, dendrite. Cell junction, synapse, postsynaptic cell membrane, postsynaptic density. Note=Predominantly cytoplasmic in unstimulated neurons but translocates to the nucleus following neuronal stimulation (PubMed:20639532, PubMed:22730302). Nuclear import is mediated by importin IPO5 (By similarity). [UniProt]</p>



ARG40606 anti-CPEB3 antibody WB image

Western blot: 25 µg of Mouse heart lysate stained with ARG40606 anti-CPEB3 antibody at 1:1000 dilution.