

Product datasheet for **MC221035**

Cpeb3 (NM_198300) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cpeb3 (NM_198300) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Cpeb3
Synonyms:	4831444O18Rik; CPE-BP3; mKIAA0940
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >MC221035 representing NM_198300
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATG**CAGGATGATTTACTGATGGACAAAAGCAAACCCAGCCCCAGTCTCAGCAGCAGCAGCGGCAGCAGC**
 AGCAGCAGCAGCAACAGCTCCAGCCCGAGCCCGGCGCAGCTGAAGCCCCGTCCACGCCCTCTCCTCAGA
 GATCCCCAAGCCCGAAGACAGTAGCGCAGTGCCGGCCCTCAGCCCCGCCTCGGCTCCGCCAGCCCCAAC
 GGCCCCGACAAGATGCAGATGGAGTCGCCGCTCCTGCCGGGCTTGAGTTCCATCAGCCCCCTCAGCAGC
 CGCCGCCCGCAGGAGCCACGGCGCCCGAGCGTCGCTGTCCGCTCCTTCGGCAGCACCTGGTCCAC
 AGGCACTACAACCGGTGGAGGACAGTCTTCCAGGGATCACCCAGTCAACGGGACCATGCTCTTC
 CAAAATTCCCGACCACGTCAACCCGGTCTTCGGAGGCACCTTCTCGCCGAGATCGGCTGGCGCAGA
 CCCAGCCATCAGCAGCTCCACCGCCCGCCCGCAGCCGCCGAGCCCGCGCAGCCCCGCGAGCCCGCAGGCGCA
 GCCCTCGCAGCAACGCCCTCGCCGCCAGCCCCAGCCAGCGCCCTATGCGCAGAGGAGCGCCGCTGCC
 TACGGCCACCAGCCCATCATGACCAGCAAGCCGCTCCTCATCTCGCGGTCGCGGCTGCTGCGGCCGCGG
 CCGCTGCCTCTTCGGCTCGTCCAGCTGGAACACGCACCAGAGCGTGAACGCCGCTGGAGTGTCCGTC
 CAACCCGTGGGGTGGCTGCAGGCGGGCCGAGACCCTCGCCGCGCGTGGCGTGGGGTGGGTGTAGGT
 GTGGGGTACCCTCCCGCTTAACCCATCTCGCCGCTCAAAAAGCCCTTCTCCAGCAATGTGATCGCTC
 CACCAAGTTCCTCGTGAGCCCCGCTCACCTCCAAGTCTGGATGGAGGATAACGCTTTCGGACCGA
 TAATGGTAACAATCTGTTGCCTTTTCAGGACCGGAGTAGGCCCTATGACACTTTAACTGCACTCCTTG
 GAGAATCCTTAATGGATATGATAAGGACTGACCATGAGCCTCTGAAAGGTAACACTACCTCCAGTG
 GCCACCAATGAGTTTCGCTGATATAATGTGGAGGAATCATTTTGCAGGACGCATGGGAATAAATTTCCA
 CCATCCAGGAACAGATAACATTATGGCACTTAACACCAGGAGCTATGGGCGGAGACGAGGTCGGTCTTCT
 CTCTTCCCTTTGAAGACGCCTTCTGGATGACAGCCATGGTGTGATCAGGCCTATCGTCTGGCTTAAGTT
 CTCCTACTCGATGCAAAATGGGAACGAGTGGAACGCTACTCTAGAAAGGTGTTTGTGGAGGCCCTTCC
 TCCTGACATCGATGAAGATGAGATCACTGCCAGCTTTCGAGGTTTGGACCCCTTGGTGGACTGGCT
 CATAAAGCCGAGAGCAAATCGTACTTCCCTCCTAAAGGCTATGCTTTCCTGCTGTCCAGGAGGAGACT
 CAGTGCAAGCTCTGATAGATGCCTGCCTGGAGGAGGATGGAAACTGTACCTGTGTGTCCAGCCCAAC
 CATCAAGGATAAACCAGTCAAAATCCGACCGTGAACCTAAGTGACAGTACTTTGTAATGGATGGCTCT
 CAGCCTTTGGACCCAGAAAACTATCTTTGTTGGGGAGTTCCACGACCCCTTCGAGCTGTTGAACTGG
 CAATGATAATGGACCGTTTGTACGGTGGTGTGCTATGCTGGCATTGACACAGACCCAGAGCTGAAGTA
 CCCGAAAGGTGCTGGGCGTGTTCGCTTCTCAATCAGCAGAGCTACATTGCAGCCATCAGTGCAGCGCTT
 GTGCAACTTAACACAACGACATTGACAACCGGTGGAAGTGAAGCCGTACGTGCTGGATGATCAGATGT
 GTGACGAGTGTACGGCACACGCTGCGGGGGAAGTTGCCCATTTCTGTGCCAACGTACCTGTCT
 GCAGTACTACTGTGAATACTGCTGGCCAGCATCCACTCCCGAGCCGCGGTGAGTTCCACAAACCGCTG
 GTGAAGGAGGGAGGCGACCGCCCCGGCACGTCCCGTTCCGCTGGAGCTGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_198300
Insert Size: 2151 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_198300.3](#), [NP_938042.2](#)

RefSeq Size: 5970 bp

RefSeq ORF: 2151 bp

Locus ID: 208922

UniProt ID: [Q7TN99](#)

Cytogenetics: 19 C2

Gene Summary:

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 (PubMed:17024188, PubMed:26074072). 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 (PubMed:17024188). Required for the consolidation and maintenance of hippocampal-based long term memory (PubMed:26074003). In the basal state, binds to the mRNA 3' UTR of the glutamate receptors GRIA1 and GRIA2 and negatively regulates their translation (PubMed:17024188, PubMed:22153079). Also represses the translation of DLG4, GRIN1 GRIN2A and GRIN2B (PubMed:24155305). When activated, acts as a translational activator of GRIA1 and GRIA2 (PubMed:22153079, PubMed:26074003). In the basal state, suppresses SUMO2 translation but activates it following neuronal stimulation (PubMed:26074071). Binds to the 3' UTR of TRPV1 mRNA and represses TRPV1 translation which is required to maintain normal thermoception (PubMed:26915043). Binds actin mRNA, leading to actin translational repression in the basal state and to translational activation following neuronal stimulation (PubMed:26074072). 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 (By similarity). 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 (By similarity). In contrast to CPEB1, CPEB2 and CPEB4, not required for cell cycle progression (By similarity). [UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (2) differs in the 5' UTR, compared to variant 1. Variants 1, 2, and 3 encode the same isoform (a). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.