

Product datasheet for **MC228755**

Cpeb3 (NM_001290826) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cpeb3 (NM_001290826) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Cpeb3
Synonyms:	4831444O18Rik; CPE-BP3; mKIAA0940
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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Fully Sequenced ORF: >MC228755 representing NM_001290826
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGCAGGATGATTTACTGATGGACAAAAGCAAACCCAGCCCCAGTCTCAGCAGCAGCAGCGGCAGCAGC
 AGCAGCAGCAGCAACAGCTCCAGCCGAGCCCGCGCAGCTGAAGCCCCGTCCACGCCCTCTCCTCAGA
 GATCCCCAAGCCGAAGACAGTAGCGCAGTGCCGGCCCTCAGCCCCGCCTCGGCTCCGCCAGCCCCAAC
 GGCCCCGACAAGATGCAGATGGAGTCGCCGCTCCTGCCGGGCTTGAGTTCCATCAGCCCCCTCAGCAGC
 CGCCGCCCGCAGGAGCCACGGCGCCCGAGCGTCGCTGTCCGCCGCTTCGGCAGCACCTGGTCCAC
 AGGCACTACAACCGGTGGAGGACAGTCTTCCAGGGATCACCCAGTCAACGGGACCATGCTCTTC
 CAAAATCTCCCGACCACGTCAACCCGGTCTTCGGAGGCACCTTCGCCGCAGATCGGCTGGCGCAGA
 CCCAGCACCATCAGCAGCTCCACCGCCCGCCGCGAGCCGCCGAGCCCGCGCAGCCCCGCGAGCCCGCAGGCGCA
 GCCCTCGCAGCAACGCCCTCGCCGCCAGCCCCAGCCAGGCGCCCTATGCGCAGAGGAGCGCCGCTGCC
 TACGGCCACCAGCCCATCATGACCAGCAAGCCGCTCCTCATCTCGCGCGTCCGGCTGCTGCGGCCCGCG
 CCGCTGCCTCTTCGGCCTCGTCCAGCTGGAACACGCACCAGAGCGTGAACGCCGCTGGAGTGTCCGTC
 CAACCCGTGGGGTGGCCTGCAGGCGGGCCGAGACCCTCGCCGCGCGTCCGGCTGGGGTGGGTGTAGGT
 GTGGGGTACCCTCCCGCTTAACCCATCTCGCCGCTCAAAAAGCCCTTCTCCAGCAATGTGATCGCTC
 CACCAAGTTCCTCGTCAGCCCCGCTCACCTCCAAGTCTGGATGGAGGATAACGCTTTCGGACCGA
 TAATGGTAACAATCTGTTGCCTTTTCAGGACCGGAGTAGGCCCTATGACACTTTAACTGCACTCCTTG
 GAGAACTCCTTAATGGATATGATAAGGACTGACCATGAGCCTCTGAAAGGTAACACTACCCTCCAGTG
 GCCACCAATGAGTTTCGCTGATATAATGTGGAGGAATCATTTTGCAGGACGCATGGGAATAAATTTCCA
 CCATCCAGGAACAGATAACATTATGGCACTTAACACCAGGAGCTATGGGCGGAGACGAGGTCGGTCTTCT
 CTCTTTCCCTTTGAAGACGCCTTCTGGATGACAGCCATGGTGTGATCAGGCCTTATCGTCTGGCTTAAGTT
 CTCCTACTCGATGCAAAATGGGAACGAGTGGAACTACTCTAGAAAGGTGTTTGTGGAGGCCCTTCC
 TCCTGACATCGATGAAGATGAGATCACTGCCAGCTTTCGAGGTTTGGACCCCTTGGTGGACTGGCCT
 CATAAAGCCGAGAGCAAATCGTACTTCCCTCCTAAAGGCTATGCTTTCCTGCTGTCCAGGAGGAGACT
 CAGTGCAAGCTCTGATAGATGCCTGCCTGGAGGAGGATGGAACTGTACCTGTGTGTGCCAGCCCAAC
 CATCAAGGATAAACCAGTCAAATCCGACCGTGGAACTAAGTGACAGTACTTTGTAATGGATGGCTCT
 CAGCCTTTGGACCCAGAAAACTATCTTTGTTGGGGAGTTCCACGACCCCTTCGAGCTGTTGAACTGG
 CAATGATAATGGACCGTTTGTACGGTGGTGTGCTATGCTGGCATTGACACAGACCCAGAGCTGAAGTA
 CCCGAAAGGTGCTGGGCGTGTTCGCTTCTCAATCAGCAGAGCTACATTGCAGCCATCAGTGCAGCCTTT
 GTGCAACTTAAACACAACGACATTGACAACCGGTGGAAGTGAAGCCGTACGTGCTGGATGATCAGATGT
 GTGACGAGTGTACGGCACACGCTGCGGGGGAAAGTTGCCCATTTCTGTGCCAACGTCACCTGTCT
 GCAGTACTACTGTGAATACTGCTGGCCAGCATCCACTCCCGAGCCGCGGTGAGTTCACAAAACCGCTG
 GTGAAGGAGGGAGGCGACCGCCCCCGCACGTCCCGTCCGCTGGAGCTGA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_001290826
Insert Size: 2151 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

OTI Annotation:	Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.
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:	<ol style="list-style-type: none">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:	<u>NM_001290826.1</u> , <u>NP_001277755.1</u>
RefSeq Size:	6259 bp
RefSeq ORF:	2151 bp
Locus ID:	208922
UniProt ID:	<u>Q7TN99</u>
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 (1) represents the longest transcript and encodes the longest isoform (a). 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.