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Product datasheet for MC228671

Cpeb3 (NM_001290829) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cpeb3 (NM_001290829) 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:

>MC228671 representing NM_001290829
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCAGGATGATTTACTGATGGACAAAAGCAAAACCCAGCCCCAGTCTCAGCAGCAGCAGCGGCAGCAGC
AGCAGCAGCAGCAACAGCTCCAGCCCGAGCCCGGCGCAGCTGAAGCCCCGTCCACGCCCCTCTCCTCAGA
GATCCCCAAGCCCGAAGACAGTAGCGCAGTGCCGGCCCTCAGCCCCGCCTCGGCTCCGCCAGCCCCCAAC
GGCCCCGACAAGATGCAGATGGAGTCGCCGCTCCTGCCGGGCTTGAGTTTCCATCAGCCCCCTCAGCAGC
CGCCGCCGCCGCAGGAGCCCACGGCGCCCGGAGCGTCGCTGTCGCCGTCCTTCGGCAGCACCTGGTCCAC
AGGCACTACAAACGCGGTGGAGGACAGCTTCTTCCAGGGGATCACCCCAGTCAACGGGACCATGCTCTTC
CAAAACTTCCCGCACCACGTCAACCCGGTCTTCGGAGGCACCTTCTCGCCGCAGATCGGCCTGGCGCAGA
CCCAGCACCATCAGCAGCCTCCACCGCCCGCGCCGCAGCCGCCGCAGCCCGCGCAGCCCCCGCAGGCGCA
GCCCTCGCAGCAACGCCGCTCGCCCGCCAGCCCCAGCCAGGCGCCCTATGCGCAGAGGAGCGCCGCTGCC
TACGGCCACCAGCCCATCATGACCAGCAAGCCGTCCTCATCCTCGGCGGTCGCGGCTGCTGCGGCCGCGG
CCGCTGCCTCTTCGGCCTCGTCCAGCTGGAACACGCACCAGAGCGTGAACGCCGCCTGGAGTGCTCCGTC
CAACCCGTGGGGTGGCCTGCAGGCGGGCCGAGACCCTCGCCGCGCGGTCGGCGTGGGCGTGGGTGTAGGT
GTGGGGGTACCCTCCCCGCTTAACCCCATCTCGCCGCTCAAAAAGCCCTTCTCCAGCAATGTGATCGCTC
CACCCAAGTTCCCTCGTGCAGCCCCGCTCACCTCCAAGTCCTGGATGGAGGATAACGCTTTCCGGACCGA
TAATGGTAACAATCTGTTGCCTTTTCAGGACCGGAGTAGGCCCTATGACACTTTTAACTTGCACTCCTTG
GAGAACTCCTTAATGGATATGATAAGGACTGACCATGAGCCTCTGAAAGGACGCATGGGAATAAATTTCC
ACCATCCAGGAACAGATAACATTATGGCACTTAACAGTCGGTCTTCTCTCTTTCCCTTTGAAGACGCCTT
CTTGGATGACAGCCATGGTGATCAGGCCTTATCGTCTGGCTTAAGTTCTCCTACTCGATGTCAAAATGGG
GAACGAGTGGAACGCTACTCTAGAAAGGTGTTTGTTGGAGGCCTTCCTCCTGACATCGATGAAGATGAGA
TCACTGCCAGCTTTCGCAGGTTTGGACCCCTTGTGGTGGACTGGCCTCATAAAGCCGAGAGCAAATCGTA
CTTCCCTCCTAAAGGCTATGCTTTCCTGCTGTTCCAGGAGGAGAGCTCAGTGCAAGCTCTGATAGATGCC
TGCCTGGAGGAGGATGGGAAACTGTACCTGTGTGTGTCCAGCCCAACCATCAAGGATAAACCGGTGCAAA
TCCGACCGTGGAACCTAAGTGACAGTGACTTTGTAATGGATGGCTCTCAGCCTTTGGACCCCAGAAAAAC
TATCTTTGTTGGGGGAGTTCCACGACCCCTTCGAGCTGTTGAACTGGCAATGATAATGGACCGTTTGTAC
GGTGGTGTTTGCTATGCTGGCATTGACACAGACCCAGAGCTGAAGTACCCGAAAGGTGCTGGGCGTGTTG
CGTTCTCCAATCAGCAGAGCTACATTGCAGCCATCAGTGCGCGCTTTGTGCAACTTCAACACAACGACAT
TGACAAACGGGTGGAAGTGAAGCCGTACGTGCTGGATGATCAGATGTGTGACGAGTGTCAGGGCACACGC
TGCGGGGGGAAGTTTGCCCCATTCTTCTGTGCCAACGTCACCTGTCTGCAGTACTACTGTGAATACTGCT
GGGCCAGCATCCACTCCCGAGCCGGCCGTGAGTTCCACAAACCGCTGGTGAAGGAGGGAGGCGACCGCCC
CCGGCACGTCCCGTTCCGCTGGAGCTGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_001290829

Insert Size: 2058 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.

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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_001290829.1, NP_001277758.1
RefSeq Size:	5758 bp
RefSeq ORF:	2058 bp
Locus ID:	208922
UniProt ID:	Q7TN99
Cytogenetics:	19 C2

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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 (5) differs in the 5' UTR, uses an alternate in-frame splice site, and lacks an alternate in-frame exon, compared to variant 1. The encoded isoform (c) is shorter than 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.

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