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Product datasheet for MG225937

Ncbp1 (NM_001033201) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ncbp1 (NM_001033201) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Ncbp1
Synonyms:	AU014645; AW538051; CBP80
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

>MG225937 representing NM_001033201
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTCGCGGAGGCGGCACAGCTACGAGAACGATGGTGGACAACCTCACAAAAGGAGGAAGACGTCTGATG
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GAGCAATCTCGAAGGCCTGGCTGGTGTTTTAGAAGCTGATCTTCCTAACTACAAGAGCAAGATCTTAAGG
CTCCTTTGTACAGTTGCACGTCTGTTACCTGAGAAGCTAACAATTTACACAACATTAGTTGGACTGCTGA
ATGCCAGGAATTACAACTTTGGAGGAGAATTTGTAGAAGCTATGATTCGTCAACTTAAAGAATCACTAAA
AGCAAATAACTATAATGAAGCTGTATATTTGGTCCGTTTTCTGTCTGATCTTGTGAATTGTCATGTGATC
GCTGCCCCGTCTATGGTTGCTATGTTTGAGAATTTTGTAAGTGTAACTCAGGAAGAAGATGTGCCTCAAG
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GTGCCCATGTTACAAGTCTGGACTGCCGACAAACCACATCCACAGGAAGAGTATTTAGATTGCCTGTGGG
CCCAGATTCAGAAATTGAAAAAAGACCGGTGGCAGGAGAGGCACATCCTAAGACCCTACCTTGCCTTTGA
CAGCATCCTCTGTGAAGCTCTGCAGCACAACCTGCCTCCTTTCACACCGCCGCCCCACACAGAGGACTCC
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CAGGGAGCCATTCGGTGGAGAGGTTTGTCATCGAGGAGAATCTTCACTGCATCATCAAGTCCTACTGGAA
GGAAAGGAAGACTTGCGCTGCCCAGCTGGTGAGCTATCCAGGGAAGAACAAGATCCCCTTGAACTACCAC
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CACTGCTAATCGAACTGTGCAAACTTCAGCCGGGCTCGCTGCCCCAAGTGCTTGCGCAGGCGACTGAGAT
GCTGTACATGCGTCTGGACACGATGAGTACCACGTGTGTTGACAGGTTTATTAATTGGTTTTCTCATCAT
CTAAGTAATTTTCAATTCCGTTGGAGCTGGGAAGATTGGTCAGATTGTCTTACTCAGGATCTTGAAAGTC
CCAAACCAAAGTTTGTAAGGGAAGTTCTAGAGAAGTGCATGAGGTTGTCTTACCATCAACATATATTAGA
TATTGTTCCTCCCACCTTCTCAGCTCTGTGTCCTGCAAACCCAACCTGCATTTACAAGTATGGAGATGAA
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ACTTGGTACGATGTGAAACGGATGGGACCAGTATATTGACCCCGTGGTATAAGAACTGCATAGAGAGGCT
GCAGCAGATCTTCCTACAGCATCACCAGACCATCCAGCAGTACATGGTGACCCTGGAGAACCTGCTCTTC
ACGGCCGAGTTAGACCCTCACATCCTGGCTGTGTTCCAGCAATTCTGTGCTCTGCAGGCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

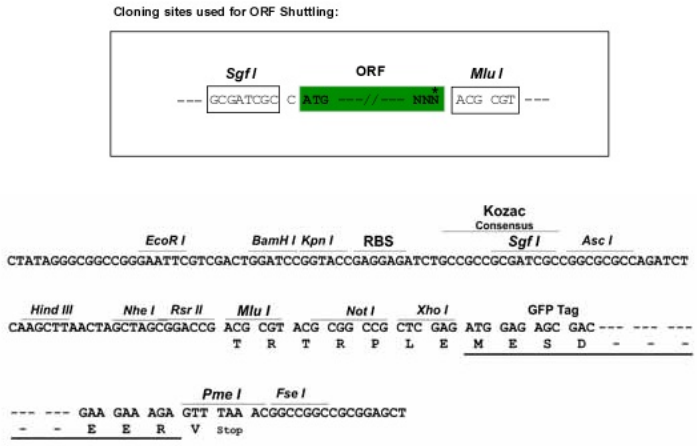
>MG225937 representing NM_001033201
Red=Cloning site Green=Tags(s)

MSRRRHSYENDGGQPHKRRKTSDANETEDHLESLICKVGEKSACSLESNLEGLAGVLEADLPNYKSKILR
LLCTVARLLPEKLTIYTTLVGLLNARNYNFGGEFVEAMIRQLKESLKANNYNEAVYLVRFLSDLVNCHVI
AAPSMVAMFENFVSVTQEEDVPQVRRDWYVYAFLSSLPWVGKELYEKKDAEMDRIFSTTESYLKRRQKTH
VPMLQVWTADKPHPQEEYLDCLWAQIQKLKKDRWQERHILRPYLAFDSILCEALQHNLPPFTPPPHTEDS
VYPMPRVIFRMFDYTDDPEGPVMPGSHSVERFVIEENLHCIIKSYWKERKTCAAQLVSYPGKNKIPLNYH
IVEVIFAELFQLPAPPHIDVMYTTLLIELCKLQPGSLPQVLAQATEMLYMRLDTMSTTCVDRFINWFSHH
LSNFQFRWSWEDWSDCLTQDLESPKPKFVREVLEKCMRLSYHQHILDIVPPTFSALCPANPTCIYKYGDE
SSNSLPGHSVALCLSVAFKSKATNDEIFSILKDVPNPNQVDDDDEGFRFNPLKIEVFVQTLLHLAAKSFS
HSFSALAKFHEVFKTLAESDKGKLHVLRVMFEVWRNHPQMIAVLVDKMIRTQIVDCAAVANWIFSSELSR
DFTRLFVWEILHSTIRKMNKHVLKIQKELEEAKEKLARQHKRRSDDDDRSSDRKDGALEEQIERLQEKVE
AAQSEQKNLFLVIFQRFIMILTEHLVRCETDGTSILTPWYKNCIERLQQIFLQHHQTIQQYMVTLENLLF
TAELDPHILAVFQQFCALQA

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001033201

ORF Size: 2370 bp

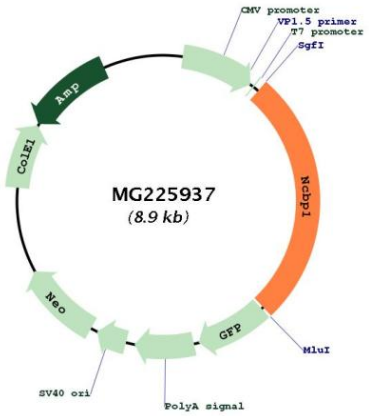
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially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

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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_001033201.3, NP_001028373.2
RefSeq Size:	3167 bp
RefSeq ORF:	2373 bp
Locus ID:	433702
UniProt ID:	Q3UYV9
Cytogenetics:	4 24.49 cM

Gene Summary: Component of the cap-binding complex (CBC), which binds cotranscriptionally to the 5'-cap of pre-mRNAs and is involved in various processes such as pre-mRNA splicing, translation regulation, nonsense-mediated mRNA decay, RNA-mediated gene silencing (RNAi) by microRNAs (miRNAs) and mRNA export. The CBC complex is involved in mRNA export from the nucleus via its interaction with ALYREF/THOC4/ALY, leading to the recruitment of the mRNA export machinery to the 5'-end of mRNA and to mRNA export in a 5' to 3' direction through the nuclear pore. The CBC complex is also involved in mediating U snRNA and intronless mRNAs export from the nucleus. The CBC complex is essential for a pioneer round of mRNA translation, before steady state translation when the CBC complex is replaced by cytoplasmic cap-binding protein eIF4E. The pioneer round of mRNA translation mediated by the CBC complex plays a central role in nonsense-mediated mRNA decay (NMD), NMD only taking place in mRNAs bound to the CBC complex, but not on eIF4E-bound mRNAs. The CBC complex enhances NMD in mRNAs containing at least one exon-junction complex (EJC) via its interaction with UPF1, promoting the interaction between UPF1 and UPF2. The CBC complex is also involved in 'failsafe' NMD, which is independent of the EJC complex, while it does not participate in Staufen-mediated mRNA decay (SMD). During cell proliferation, the CBC complex is also involved in microRNAs (miRNAs) biogenesis via its interaction with SRRT/ARS2 and is required for miRNA-mediated RNA interference. The CBC complex also acts as a negative regulator of PARN, thereby acting as an inhibitor of mRNA deadenylation. In the CBC complex, NCBP1/CBP80 does not bind directly capped RNAs (m7GpppG-capped RNA) but is required to stabilize the movement of the N-terminal loop of NCBP2/CBP20 and lock the CBC into a high affinity cap-binding state with the cap structure. Associates with NCBP3 to form an alternative cap-binding complex (CBC) which plays a key role in mRNA export and is particularly important in cellular stress situations such as virus infections. The conventional CBC with NCBP2 binds both small nuclear RNA (snRNA) and messenger (mRNA) and is involved in their export from the nucleus whereas the alternative CBC with NCBP3 does not bind snRNA and associates only with mRNA thereby playing a role only in mRNA export. NCBP1/CBP80 is required for cell growth and viability (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG225937