

Product datasheet for **MG206785**

Actl6b (NM_031404) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Actl6b (NM_031404) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Actl6b
Synonyms:	Actl6; ArpNa; Baf53b
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG206785 representing NM_031404 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAGCGGGGCGTCTACGGCGGAGATGAGGTGGGGCGCTCGTCTTTGACATTGGCTCTTTCTCAGTCC
GAGCTGGGTACGCTGGGAGGACTGCCCAAGGCTGACTTCCCCACCCTGTGGGGCTGTGGCCGAGA
AGAGGGGGCGGGCTGGAGCTGGAGGGGAGAAAGAGAAGAAAGGGAAGATTTCCACATCGACACCAAT
GCCCTGCACGTGCCTCGGATGGAGCGGAGTCAATGTCGCCCTCAAGAATGGCATGATTGAGGACTGG
AGTGCTTCGAGCCATCCTGGATCATACCTACAGCAAACATGTCAAGTCCGAGCCAAACCTGCACCCAGT
ACTCATGTCCGAGGCTCCGTGGAACACTCGGGCCAAGCGGGAGAAGCTGACGGAGCTGATGTTCCGAGCAG
TACAACATTCTGCTTCTTCTTATGCAAGACGGCCGTGCTCACAGCCTTTGCAAATGGACGCTCCACAG
GCCTGGTGTGGACAGTGGGGCCACCCACACTACAGCCATCCCAGTCCATGATGGCTATGTCTACAGCA
AGGCATCGTCAAGTCCCCCTGGCAGGGGACTTCATCTCCATGCAGTGCCGGGAGCTCTTCCAGGAAATG
GCTATTGATATCATTCTCCTTACATGATTGCAGCCAAGGAGCCTGTACGGGAGGGAGCCCCCAAACCT
GGAAGAAGAAGGAGAAGCTACCCCAAGTCTCCAAGTCTGGCATAACTACATGTGTAACGAGGTGATCCA
AGACTTCCAGGCCTCCGTAAGTGCAGGTGTCTGATTCCTTACGATGAACAGGTAGCTGCACAAATGCC
ACTGTGCATTATGAAATGCCAATGGCTACAACACAGACTACGGCGCTGAGCGACTTCAATCCCTGAGG
GCCTGTTTGATCCCTCTAATGTCAAGGGCCTGTCCGGAATACCATGCTAGGAGTGGGTACGTGGTCCAC
CACCAGCATCGGCATGTGTGACATTGACATTCCGCCGGGTCTCTATGGCAGTGTCAATTGTCACTGGCGG
AACACTCTGCTTCAGGGTTTACAGACAGACTTAATCGGGAGCTTTCTCAGAAGACCCACCGAGCATGC
GTCTTAAGCTCATCGCCAGCAACAGCACCATGGAACGCAAGTTCAGCCCCGGATTGGAGGCTCCATCTT
GGCCTCACTGGGCACATTCCAGCAGATGTGGATCTCCAAACAGGAATACGAGGAGGGAGGGAAGCAGTGC
GTGGAGCGGAAGTGCCCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >MG206785 representing NM_031404
 Red=Cloning site Green=Tags(s)

MSGGVYGGDEVGALVFDIGSFSVRAGYAGEDCPKADFPTTVGLLAAEEGGGLEGEKEKKGKIFHIDTN
 ALHVPRDGAEVMSPLKNGMIEDWECFRAILDHTYSKHVKSEPNLHPVLMSEAPWNTRAKREKLTLMFEQ
 YNIPAFFLCKTAVLTAFAANGRSTGLVLDGATHHTAIPVHDGYVLQGGIVKSPLAGDFISMQCRELQEM
 AIDIIPPYMIAAKEPVRREGAPPNWKKEKLPQVSKSWHNYMCNEVIQDFQASVLQVSDSPYDEQVAAQMP
 TVHYEMPNGYNTDYGAERLRIPEGLFDP SNVKGLSGNTMLGVGHVVTTSIGMCDIDIRPGLYGSVIVTGG
 NTLQGFTRDLNREL SQTTPSMRLKLIASNSTMERKFSPIWIGGSILASLGTFFQQMWISKQEYEEGGKQC
 VERKCP

TRTRPLE - GFP Tag - V

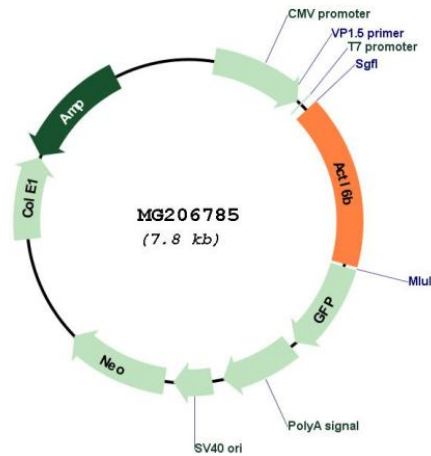
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:

NM_031404

ORF Size:	1278 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:	<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:	NM_031404.5
RefSeq Size:	1579 bp
RefSeq ORF:	1281 bp
Locus ID:	83766
UniProt ID:	Q99MR0
Cytogenetics:	5 G2

Gene Summary:

Involved in transcriptional activation and repression of select genes by chromatin remodeling (alteration of DNA-nucleosome topology). Component of SWI/SNF chromatin remodeling complexes that carry out key enzymatic activities, changing chromatin structure by altering DNA-histone contacts within a nucleosome in an ATP-dependent manner. Belongs to the neuron-specific chromatin remodeling complex (nBAF complex), as such plays a role in remodeling mononucleosomes in an ATP-dependent fashion, and is required for postmitotic neural development and dendritic outgrowth. During neural development a switch from a stem/progenitor to a postmitotic chromatin remodeling mechanism occurs as neurons exit the cell cycle and become committed to their adult state. The transition from proliferating neural stem/progenitor cells to postmitotic neurons requires a switch in subunit composition of the npBAF and nBAF complexes. As neural progenitors exit mitosis and differentiate into neurons, npBAF complexes which contain ACTL6A/BAF53A and PHF10/BAF45A, are exchanged for homologous alternative ACTL6B/BAF53B and DPF1/BAF45B or DPF3/BAF45C subunits in neuron-specific complexes (nBAF). The npBAF complex is essential for the self-renewal/proliferative capacity of the multipotent neural stem cells. The nBAF complex along with CREST plays a role regulating the activity of genes essential for dendrite growth. ACTL6B/BAF53B is not essential for assembly of the nBAF complex but is required for targeting the complex and CREST to the promoter of genes essential for dendritic growth. [UniProtKB/Swiss-Prot Function]