

## Product datasheet for **RN206892**

### Actl6b (NM\_001105917) Rat Untagged Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Actl6b (NM\_001105917) Rat Untagged Clone  
**Tag:** Tag Free  
**Symbol:** Actl6b  
**Synonyms:** Actl6  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**Fully Sequenced ORF:** >RN206892 representing NM\_001105917  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAGCGGGGGCTCTACGGCGGAGATGAGGTGGGGCGCTCGTCTTTGACATTGGCTCCTTCTCAGTCC  
 GAGCTGGGTACGCTGGGAGGACTGCCCAAGGCTGACTTCCCCACCAGTGTGGGGCTGTGGCCGAGA  
 AGAGGGGGCGGGCTGGAGCTGGAGGGGAGAAAGAGAAGAAAGGAAGATTTTCCACATCGACACCAAT  
 GCCCTGCACGTGCCTCGGATGGAGCAGAGGTCATGTCGCCCCAAGAACGGCATGATTGAGGACTGGG  
 AGTGCTCCGAGCCATCCTGGATCATACCTACAGCAAACATGTCAAGTCCGAACCAACCTGCACCCAGT  
 ACTCATGTCCGAGGCTCCGTGGAACACTCGGGCAAGCGGGAGAAGCTGACAGAGCTGATGTTCCGAGCAG  
 TACAACATTCTGCCTTCTTATGCAAGACGGCCGTGCTCACAGCCTTTGCAATGGACGCTCCACAG  
 GCCTGGTGTAGACAGCGGGCCACCCACACTACAGCCATCCCAGTCCATGATGGCTATGTCCTACAGCA  
 AGGCATCGTCAAGTCAACCCTGGCTGGCGACTTCATATCCATGCAGTCCCGGGAGCTCTCCAGGAAATG  
 GCTATTGATATCATCCCTCCTTACATGATTGCTGCCAAGGAGCCTGTACGGGAGGGAGCCCCCAAATG  
 GGAAGAAGAAGGAGAAGCTACCCCAAGTCTCAAGTCTGGCATAACTACATGTGTAACGAGGTGATCCA  
 AGACTTCCAGGCCTCTGTACTGCAGGTGTCTGATTCCCCTTACGATGAACAGGTAGCTGCACAAATGCC  
 ACAGTGCATTATGAAATGCCAATGGCTACAACACAGACTATGGTGTGAGAGACTTCGCATCCCTGAGG  
 GCCTGTTTATCCCTCTAATGTCAAGGGTCTGTCTGGGAACACCATGCTAGGAGTGGGTACAGTGGTCC  
 CACCAGCATCGGCATGTGTGACATCGACATTCGCCCGGGTCTCTATGGCAGTGTCAATTGTACTGGCGG  
 AACACTCTGCTTCAGGGTTTACAGACAGACTTAATCGGGAGCTTTCCAGAAGACCCACCCAGCATGC  
 GGCTCAAGCTTATCGCCAGCAACAGCACCATGGAACGCAAGTTCAGCCCCGGATTGGGGCTCCATCTT  
 GGCTCACTGGGCAGTTCAGCAGATGTGGATCTCCAAGCAGGAATATGAGGAGGGAGGGAAGCAGTGT  
 GTGGAGCGGAAGTGCCCTGA

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA



<b>Restriction Sites:</b>	Sgfl-Mlul
<b>ACCN:</b>	NM_001105917
<b>Insert Size:</b>	1281 bp
<b>OTI Disclaimer:</b>	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).
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u><a href="#">NM_001105917.1</a></u> , <u><a href="#">NP_001099387.2</a></u>
<b>RefSeq Size:</b>	1562 bp
<b>RefSeq ORF:</b>	1281 bp
<b>Locus ID:</b>	288563
<b>UniProt ID:</b>	<u><a href="#">P86173</a></u>
<b>Cytogenetics:</b>	12q12

**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]