

Product datasheet for **SC108893**

BAF53A (ACTL6A) (NM_177989) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	BAF53A (ACTL6A) (NM_177989) Human Untagged Clone
Tag:	Tag Free
Symbol:	BAF53A
Synonyms:	ACTL6; Arp4; ARPN-BETA; BAF53A; INO80K
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >OriGene sequence for NM_177989 edited
 GAATTCGGCACGAGGAGTCACTTCGCCAGTTAGCCCTTAGGGTAGGAGTCGCGCCGGCAG
 CAGCCATGAGCGGCGCGTGTACGGGGAGATGAAGTTGGAGCCCTTGTTTTGACATTG
 GATCCTATACTGTGAGAGCTGGTTATGCTGGTGAGGACTGCCCAAGGTGGATTTTCTA
 CAGCTATTGGTATGGTGGTAGAAAGAGATGACGGAAGCACATTAATGGAAATAGATGGCG
 ATAAAGGCAACAAGGCGGTCCCACCTACTACATAGATACTAATGCTCTGCGTGTCCGA
 GGGGAAATATGGAGGCCATTTACCTCTAAAAAATGGGATGGTTGAAGACTGGGATAGTT
 TCCAAGCTATTTTGGATCATACCTACAAAATGCATGTCAAATCAGAAGCCAGTCTCCATC
 CTGTTCTCATGTGAGAGCACCGTGAATACTAGAGCAAAGAGAGAGAACTGACAGAGT
 TAATGTTTGAACACTACAACATCCCTGCCTTCTCCTTTGCAAACTGCAGTTTTGACAG
 CATTTGCTAATGGTCTTCTACTGGGCTGATTTTGGACAGTGGAGCCACTCATACCACTG
 CAATTCAGTCCACGATGGCTATGCTCTCAACAAGGCATTGTGAAATCCCCTCTTGCTG
 GAGACTTTATTACTATGCAGTGCAGAGAACTCTCCAAGAAATGAATATTGAATTGGTTC
 CTCCATATATGATTGCAACAAAAGAAGCTGTTCTGTAAGGATCTCCAGCAAAGTGGAAAA
 GAAAAGAGAAGTTGCCTCAGGTTACGAGGCTTGGCACAATTATATGTGTAATTGTGTTA
 TCCAGGATTTTCAAGCTTCGGTACTTCAAGTGTGAGATCAACTTATGATGAACAAGTGG
 CTGCACAGATGCCAACTGTTTATTATGAATCCCAATGGCTACAATTGTGATTTTGGTG
 CAGAGCGGCTAAAGATCCAGAAGGATTATTTGACCCTTCCAATGTAAAGGGTTATCAG
 GAAACACAATGTTAGGAGTCAGTCATGTTGTCACCACAAGTGTGGGATGTGTGATATTG
 ACATCAGACCAGGTCTCTATGGCAGTGTAAAGTGGCAGGAGGAAACACACTAATACAGA
 GTTTTACTGACAGGTTGAATAGAGAGCTGTCTCAGAAAACCTCCAAGTATGCGGTTGA
 AATTGATTGCAATAATACAACAGTGAACGGAGGTTTAGCTCATGGATTGGCGGCTCCA
 TTCTAGCCTCTTTGGGTACCTTTCAACAGATGTGGATTTCCAAGCAAGAATATGAAGAAG
 GAGGGAAGCAGTGTGTAGAAAGAAAATGCCCTTGAGAAAAGGTTCCAAGCTTCTACCTT
 CCTTTTGTACCTTACGTTTTCATAGCTTTAGTATACTCAGGAAAAGAATGACCATCTTTT
 GTAGAATGTTTATACATTTTGCATATTTCAATTTCCACTTAAATTTTTTAAAGCTTTAA
 CTGGCTCTATAAATTAAGTTTGTGCTTTCCTTGAATGCACCTATTCTTATTACAAGCAT
 TTTATAATTTGTATAAATGTCTATTTTCTCTAAATATTTGCTTTCAGTAAAATGCTTT
 CCAACTCTGTTTAGTGTATTAATTACCAGTGGATTGGTAGAACTGCTTTTTATTGACTAG
 TAAAAGTTACTGCCTATGCTTTTTACCTTAGGCTTACAGAATTAATAAAAAATTAGCCAT
 TCCAGAAATAAAAAAAAAAAAAAAAAAACTCGAC

5' Read Nucleotide Sequence: >OriGene 5' read for NM_177989 unedited
 AATACGACTCACTATAGGGCGGCCGCAATTCGGCACGAGGTGTGGCTGAGCTCCGGGGT
 GTGTGGACGCCGCTTTGTTGCCTGAGATGAAGTTGGAGCCCTTGTTTTGACATTGGATC
 CTATACTGTGAGAGCTGGTTATGCTGGTGAGGACTGCCCAAGGTGGATTTTCTACAGC
 TATTGGTATGGTGGTAGAAAGAGATGACGGAAGCACATTAATGGAAATAGATGGCGATAA
 AGGCAACAAGGCGGTCCCACCTACTACATAGATACTAATGCTCTGCGTGTCCGAGGGA
 GAATATGGAGGCCATTTACCTCTAAAAAATGGGATGGTTGAAGACTGGGATAGTTTCCA
 AGCTATTTTGGATCATACCTACAAAATGCATGTCAAATCAGAAGCCAGTCTCCATCCTGT
 TCTCATGTGAGAGCACCGTGAATACTAGAGCAAAGAGAGAGAACTGACAGAGTTAAT
 GTTTGAACACTACAACATCCCTGCCTTCTCCTTTGCAAACTGCAGTTTTGACAGCATT
 TGCTAATGGTCTTCTACTGGGCTGATTTTGGACAGTGGAGCCACTCATACCACTGCAAT
 TCCAGTCCACGATGGCTATGCTCTCAACAAGGCATTGTGAAATCCCCTCTTGCTGGAGA
 CTNTATTACTATGCAGTGCAGAGAACTCTCCAAGAATGAATATTGAATTGGTTCCTCCA
 TATATGATTGCAACNAAAGAAGCTGTTCTGTAAGGATCTNCAGCANACTGGAAAAGAAA
 GAGAAGTTGCCTCANGTTACGAGGGTCTGGCACATTATATGTGTAATTTGTATNCCAG
 ATTTTCAAAGCTTCGACTTCAGTGTGAGATCACTTATGATGAACAGTGGCTGCACANA
 TGCCACTGTTTCAATTTGAATCCCATGGCTACATTGTGATTTGGTGCANAGCGCTAAGAT
 TCA

3' Read Nucleotide Sequence:	>OriGene 3' read for NM_177989 unedited TAACCGCGCCGCAATCTAGGATCGAGTT TTTTTATATTTCTGGAATGGCTAATTTTTATTTAATTCTGTAAGCCTAAGGGAAAAAGCA TAGGCAGTAACTTTACTAGTCAATAAAAAGCAGTTCTACCAATCCACTGGTAATTAATA CACTAAACAGAGTTGAAAGCATTCTGAAAGCAAAATATTTAGAGAAAATAGACATT TATACAAAATTATAAAATGCTTGAATAAAAATAAGGGCATTTCAGGAAAGCACAAACT TAATTTATAGAGCCAGTTAAAGCTTTAAAAAATTAAGGGGAAATTGAAATATGCAAAAA TGATAAACATTCTACAAAAGATGGGCATTCTTTTCTGAGTATACTAAAGCTATGAAAC GTAAGGGGACAAAAGGAAGGTAAAGCTTGGAACTCTTCTCAAGGGCATTCTTCTCT ACACACTGCTTCCTCCTTCTTCATATTCTTGCTTGGAAATCCACATCTGTTGAAAGGTA CCCAAAGAGGCTAAAATGGAGCCCAATCCATGAGCTAAACCTCCGTTCCACTGTTGTA TTATTTGCAATCAATTTCAACCGCATACTTGGAGGAGTTTTCTGAGACAGCTCTCTATTC AACCTGTCAGTAAACTCTGTATTAGTGTGTTTCTCCTGCCACTATTACACTGCCATAG AGACCTGGTCTGATGTCAATATCACACATCCCAACACTTGTGGTGACAACATGACTGACT CCTAACAAATGGGTTTCTGATAACCCCTTACATTGGAAGGGTCAAATATCCTTTCTGG ATCTTTAGCGCTCTGCACCAAATCACATTGTAGCCATTGGGGAATCATAATGAACAGTTG CATCTGTGCAGCCACTGTCATCATAGTTGGATCTGACCTTGAGTACC
Restriction Sites:	NotI-NotI
ACCN:	NM_177989
Insert Size:	1950 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).
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_177989.1</u> , <u>NP_817126.1</u>
RefSeq Size:	1737 bp
RefSeq ORF:	1164 bp
Locus ID:	86
UniProt ID:	<u>O96019</u>
Cytogenetics:	3q26.33
Protein Families:	Druggable Genome, Transcription Factors

Gene Summary:

This gene encodes a family member of actin-related proteins (ARPs), which share significant amino acid sequence identity to conventional actins. Both actins and ARPs have an actin fold, which is an ATP-binding cleft, as a common feature. The ARPs are involved in diverse cellular processes, including vesicular transport, spindle orientation, nuclear migration and chromatin remodeling. This gene encodes a 53 kDa subunit protein of the BAF (BRG1/brm-associated factor) complex in mammals, which is functionally related to SWI/SNF complex in *S. cerevisiae* and *Drosophila*; the latter is thought to facilitate transcriptional activation of specific genes by antagonizing chromatin-mediated transcriptional repression. Together with beta-actin, it is required for maximal ATPase activity of BRG1, and for the association of the BAF complex with chromatin/matrix. Three transcript variants that encode two different protein isoforms have been described. [provided by RefSeq, Jul 2008]

Transcript Variant: This variant (2) uses an alternate splice site in the 5' coding region that results in the use of a downstream start codon, compared to variant 1. Variants 2 and 3 both encode isoform b, which has a shorter N-terminus when compared to isoform a. This variant is also known as Nbeta2 and isoform b is also known as hArpNbetaS. Isoform b is found mostly in the cytoplasm.