OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for SC111098

AIF (AIFM1) (NM_004208) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	AIF (AIFM1) (NM_004208) Human Untagged Clone
Tag:	Tag Free
Symbol:	AIF
Synonyms:	AIF; AUNX1; CMT2D; CMTX4; COWCK; COXPD6; DFNX5; NADMR; NAMSD; PDCD8; SEMDHL
Mammalian Cell Selection:	None
Vector:	pCMV6-XL5
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF:

>OriGene ORF within SC111098 sequence for NM_004208 edited (data generated by NextGen Sequencing)

ATGTTCCGGTGTGGAGGCCTGGCGGCGGGTGCTTTGAAGCAGAAGCTGGTGCCCTTGGTG
CGGACCGTGTGCGTCCGAAGCCCGAGGCAGAGGAACCGGCTCCCAGGCAACTTGTTCCAG
CGATGGCATGTTCCTCTAGAACTCCAGATGACAAGACAAATGGCTAGCTCTGGTGCATCA
GGGGGCAAAATCGATAATTCTGTGTTAGTCCTTATTGTGGGCTTATCAACAGTAGGAGCT
GGTGCCTATGCCTACAAGACTATGAAAGAGGATGAAAAAAGATACAATGAAAGAATTTCA
GGGTTAGGGCTGACACCAGAACAGAAACAGAAAAAGGCCGCGTTATCTGCTTCAGAAGGA
GAGGAAGTTCCTCAAGACAAGGCGCCAAGTCATGTTCCTTTCCTGCTAATTGGTGGAGGC
ACAGCTGCTTTTGCTGCAGCCAGATCCATCCGGGCTCGGGATCCTGGGGCCAGGGTACTG
ATTGTATCTGAAGATCCTGAGCTGCCGTACATGCGACCTCCTCTTTCAAAAGAACTGTGG
TTTTCAGATGACCCAAATGTCACAAAGACACTGCGATTCAAACAGTGGAATGGAAAAGAG
AGAAGCATATATTTCCAGCCACCTTCTTTCTATGTCTCTGCTCAGGACCTGCCTCATATT
GAGAATGGTGGTGTGGCTGTCCTCACTGGGAAGAAGGTAGTACAGCTGGATGTGAGAGAC
AACATGGTGAAACTTAATGATGGCTCTCAAATAACCTATGAAAAGTGCTTGATTGCAACA
GGAGGTACTCCAAGAAGTCTGTCTGCCATTGATAGGGCTGGAGCAGAGGTGAAGAGTAGA
ACAACGCTTTTCAGAAAGATTGGAGACTTTAGAAGCTTGGAGAAGATTTCACGGGAAGTC
AAATCAATTACGATTATCGGTGGGGGCTTCCTTGGTAGCGAACTGGCCTGTGCTCTTGGC
AGAAAGGCTCGAGCCTTGGGCACAGAAGTGATTCAACTCTTCCCCGAGAAAGGAAATATG
GGAAAGATCCTCCCCGAATACCTCAGCAACTGGACCATGGAAAAAGTCAGACGAGAGGGG
GTTAAGGTGATGCCCAATGCTATTGTGCAATCCGTTGGAGTCAGCAGTGGCAAGTTACTT
ATCAAGCTGAAAGACGGCAGGAAGGTAGAAACTGACCACATAGTGGCAGCTGTGGGCCTG
GAGCCCAATGTTGAGTTGGCCAAGACTGGTGGCCTGGAAATAGACTCAGATTTTGGTGGC
TTCCGGGTAAATGCAGAGCTACAAGCACGCTCTAACATCTGGGTGGCAGGAGATGCTGCA
TGCTTCTACGATATAAAGTTGGGAAGGAGGCGGGTAGAGCACCATGATCACGCTGTTGTG
AGTGGAAGATTGGCTGGAGAAAATATGACTGGAGCTGCTAAGCCGTACTGGCATCAGTCA
ATGTTCTGGAGTGATTTGGGCCCCGATGTTGGCTATGAAGCTATTGGTCTTGTGGACAGT
AGTTTGCCCACAGTTGGTGTTTTTGCAAAAGCAACTGCACAAGACAACCCCAAATCTGCC
ACAGAGCAGTCAGGAACTGGTATCCGATCAGAGAGTGAGACAGAGTCCGAGGCCTCAGAA
ATTACTATTCCTCCCAGCACCCCGGCAGTTCCACAGGCTCCCGTCCAGGGGGAGGACTAC
GGCAAAGGTGTCATCTTCTACCTCAGGGACAAAGTGGTCGTGGGGATTGTGCTATGGAAC
ATCTTTAACCGAATGCCAATAGCAAGGAAGATCATTAAGGACGGTGAGCAGCATGAAGAT
CTCAATGAAGTAGCCAAACTATTCAACATTCATGAAGACTGA

Clone variation with respect to NM_004208.3

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_004208 unedited
TTTTAGGATTTTGTAATACGATCTCACTATAGGGCGGCCGCGAATCGGCACGAGGGAGAG
GAAAGGGAAGGAGGAGGTCCCGAATAGCGGTCGCCGAAAGTTCCGGTGTGGAGGCCTGGC
GGCGGGTGCTTTGAAGCAGAAGCTGGTGCCCTTGGTGCGGACCGTGTGCGTCCGAAGCCC
GAGGCAGAGGAACCGGCTCCCAGGCAACTTGTTCCAGCGATGGCATGTTCCTCTAGAACT
CCAGATGACAAGACAAATGGCTAGCTCTGGTGCATCAGGGGGCAAAATCGATAATTCTGT
GTTAGTCCTTATTGTGGGCTTATCAACAGTAGGAGCTGGTGCCTATGCCTACAAGACTAT
GAAAGAGGATGAAAAAAGATACAATGAAAGAATTTCAGGGTTAGGGCTGACACCAGAACA
GAAACAGAAAAAGGCCGCGTTATCTGCTTCAGAAGGAGAGGAAGTTCCTCAAGACAAGGC
GCCAAGTCATGTTCCTTTCCTGCTAATTGGTGGAGGCACAGCTGCTTTTGCTGCAGCCAG
ATCCATCCGGGCTCGGGATCCTGGGGCCAGGGTACTGATTGTATCTGAAGATCCTGAGCT
GCCGTACATGCGACCTCCTCTTTCAAAAGAACTGTGGTTTTCAGATGACCCACATGTCAC
AAAGACACTGCGATTCAAACAGTGGAATGGAAAAGAGAGAAGCATATATTTCCAGCCACC
TTCTTTCTATGTCTCTGCTCANGACCTGCCTCATATTGAGAATGGCGCTGTGGCTGTCCT
CACTGTGAAGAAGTAGTACACCTGGATGTGACAGACAACAGGGTGAAACTTAATGATGGC
TCTCCAATAACCTATGAAAAGTGCCTTGATTGCAACAAGTAGGTACTTCCAACAAGTCTG
TCTTGCCATTGATACGCGCTGGAC

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_004208 unedited
ACCGCGGCCGCAATCTANAGTCGAGTTTTTTTTTTTTTTTTTTAGAAGAACAGAATTTAT
TTCACTATGTGAACATTAAGAATTTACCTACATAGTTGAAAATATTCACAAAGGACTTGA
TCATTCACACTCATACACAGAGAAAGTCTGCTGAATAAAAAAATGCTCCTTTACCCATTC
GACCTCCTCTCAGGGGCTGCAGTGGGTTTGCCAATTCCACTGTGGGGCTTCAGTCTTCAT
GAATGTTGAATAGTTTTGCTACCTCCATTGGAAACTTATGCTGGCCCCCCGGGCCTTAAA
AGAACCCCCCTGCTTTTGGGGCTTGGGGAAAAAAAAGGTTCAAAAAAAAAACCCCCCCAA
CCCTTTTTTCTCTGGGGGGAAAAAAAAAAAAACCTTTTTCGGGGAAACCCCCCCCCCCCC
GAGGAGGGATCCTTTTTAATAACCCCGGGGGGGGGGGGGGAGGAAAAAAAAAATTTTTG
TGGGCGGGGGGGCTCTTTTTTTTTTTTTTTTTTTGGAGGGCAACACCCCCCCTCTTTCT
TTTTTTGAGAAAAAAAAAAGGGGGTGTGTTTTTACCCTCATTTCTTTTCCAAAAAAACAC
CCCGCGCGGGGGGTGTTCTCCTCCCCCAAAAAACAAAAACTAATTTTTTTATTCGGTACGCG
CGGGGGGCGCTCCACCACACACAAACGAATTAGTGGGGCGAGGGGGGGCCGGCGAATACC
AACACACTATTTTTCTTTTTTTTTTCTCTCTCTCCCCTCCCCCCCACCCCACCCGAGACG
GGGGGGGGTGGCGGGGCCCCCCCCCCCCCCTCCTCTTATNTTTACACCAAAACAACCCAC
CCTCCTCCTCTCCTCCCCCACTCAGATACTATATATGCATTCGCCGTCTCTCTCCCACTC
TAATAAACCAAAAACT

Restriction Sites: NotI-NotI

ACCN: NM_004208

Insert Size: 2000 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:	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_004208.2, NP_004199.1
RefSeq Size:	2215 bp
RefSeq ORF:	1842 bp
Locus ID:	9131
UniProt ID:	O95831
Cytogenetics:	Xq26.1
Domains:	pyr_redox
Protein Families:	Druggable Genome, Transmembrane
Protein Pathways:	Apoptosis
Gene Summary:	This gene encodes a flavoprotein essential for nuclear disassembly in apoptotic cells, and it is found in the mitochondrial intermembrane space in healthy cells. Induction of apoptosis results in the translocation of this protein to the nucleus where it affects chromosome condensation and fragmentation. In addition, this gene product induces mitochondria to release the apoptogenic proteins cytochrome c and caspase-9. Mutations in this gene cause combined oxidative phosphorylation deficiency 6 (COXPD6), a severe mitochondrial encephalomyopathy, as well as Cowchock syndrome, also known as X-linked recessive Charcot-Marie-Tooth disease-4 (CMTX-4), a disorder resulting in neuropathy, and axonal and motor-sensory defects with deafness and cognitive disability. Alternative splicing results in multiple transcript variants. A related pseudogene has been identified on chromosome 10. [provided by RefSeq, Aug 2015] Transcript Variant: This variant (1) encodes the longest isoform (AIF).