

## Product datasheet for **SC100268**

### AIF (AIFM1) (NM\_145813) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	AIF (AIFM1) (NM_145813) Human Untagged Clone
Tag:	Tag Free
Symbol:	AIF
Synonyms:	AIF; CMT2D; CMTX4; COWCK; COXPD6; NADMR; NAMSD; PDCD8
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL4</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_145813, the custom clone sequence may differ by one or more nucleotides

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ATGTTCCGGTGTGGAGGCTGGCGGCGGGTGCTTTGAAGCAGAAGCTGGTGCCCTTGGTGCGGACCGTGT
GCGTCCGAAAGCCCGAGGCAGAGGAACCGGCTCCCAGCTCGAGCCTTGGGCACAGAAGTGATTCAACTCTT
CCCCGAGAAAGGAAATATGGGAAAGATCTCCCGAATACCTCAGCAACTGGACCATGGAAAAAGTCAGA
CGAGAGGGGGTTAAGGTGATGCCAATGCTATTGTGCAATCCGTTGGAGTCAGCAGTGGCAAGTTACTTA
TCAAGCTGAAAGACGGCAGGAAGGTAGAACTGACCACATAGTGGCAGCTGTGGGCTGGAGCCCAATGT
TGAGTTGGCCAAGACTGGTGGCCTGAAATAGACTCAGATTTTGGTGGCTCCGGGTAATGCAGAGCTA
CAAGCACGCTCTAACATCTGGGTGGCAGGAGATGCTGCATGCTTCTACGATATAAAGTTGGGAAGGAGGC
GGGTAGAGCACCATGATCACGCTGTTGTGAGTGAAGATTGGCTGGAGAAAATATGACTGGAGCTGCTAA
GCCGTA CTGGCATCAGTCAATGTTCTGGAGTGATTTGGGCCCGATGTTGGCTATGAAGCTATTGGTCTT
GTGGACAGTAGTTTGCCACAGTTGGTGTGTTTTGCAAAAGCAACTGCACAAGACAACCCCAATCTGCCA
CAGAGCAGTCAGGAAGTGGTATCCGATCAGAGAGTGAGACAGAGTCCGAGGCCTCAGAAATTA CTATTCC
TCCCAGCACCCCGCAGTTCACAGGCTCCCGTCCAGGGGGAGGACTACGGCAAAGGTGTCATCTTCTAC
CTCAGGGACAAAGTGGTCGTGGGATTGTGCTATGGAACATCTTTAACCGAATGCCAATAGCAAGGAAGA
TCATTAAGGACGGTGAGCAGCATGAAGATCTCAATGAAGTAGCCAACTATTCAACATTCATGAAGACTG
A
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<b>5' Read Nucleotide Sequence:</b>	<p>&gt;OriGene 5' read for NM_145813 unedited</p> <pre> NGGGGGTTCGAGATTTGTATACGATTCATATAGGGCGGCCGGAATTCGCACGAGGTCGC CGTTCCCTTCCCGGCTCTAGCAGGCCGGTCTCTGTCCAATGCCACCCGGAGCTGG GAGGAGGAGTCTGCGTAATGTGCGTGTGAAGAGACTGGGGGAGCTGGCCGGGGCTCACGG TGTTTGACCCGTCGGTGTGCGTGTGAGAGAAAGGAAGGAGGAGTCCGAATAGCGGTC GCCGAAATGTTCCGGTGTGGAGGCTGGCGCGGGTGTGTTGAAGCAGAAGCTGGTGCC TTGGTGGGACCGTGTGCGTCCGAGCCGAGGAGGAAACCGGCTCCAGGCAACTTG TTCCAGCGATGGCATGTTCTCTAGAACTCCAGATGACAAGACAAATGGCTAGCTCTGGT GCATCAGGGGGCAAATCGATAATTCTGTGTTAGTCCTTATTGTGGGCTTATCAACAGTA GGAGCTGGTGCCTATGCCTACAAGACTATGAAAGAGGATGAAAAAAGATACAATGAAAGA ATTTACAGGTTAGGGCTGACACCAGAACAGAAACAGAAAAAGGCCGCTTATCTGCTTCA GAAGGAGAGGAAGTTCCTCAAGACAAGGCGCAAGTCATGTTCTTTCTGCTAATTGGT GGAGGCACAGCTGCTTTTGTGTCAGCCAGATCCATCCGGGCTCGGGATCCTGGGGCCAGG GTACTGATTGTATCTGAAGATCCTGAGCTGCCGTACATGCGACCTCTTTCAAAAAAC TGTGGTTTTAGATGACCCAAATGTCACAAAGACTGCGATTCAAACAGTGGAATGGNA AAAGAGAAAGCATATATTTCCAGCCACCTTCTTCTATGTCTCTGCTCAGGACTGNCT </pre>
<b>3' Read Nucleotide Sequence:</b>	<p>&gt;OriGene 3' read for NM_145813 unedited</p> <pre> GGCTCCTTTATGNACCGCGTCCGCAATTCTANATCTCGAGTTTTTTTTTTTTTTTTTTTT TTAAAAAATCAAATTTATTTCACTATGGGAA CCTTAAAAATTTACCTACCTAGTTGAAAAATTTACAAAAGGACTTGATCATTCACTCA TACCCAGAGAAAGTCTGCTGAATAAAAAATGCTCCTTTACCCATTGACCTCCTCTCAA GGGCTGCAGGGGTTTGCCAATCCACTGGGGGGTTCAGTCTTCATGAATGTTGATAG TTTGGCTACTTCATTGAGATCTTCATGCTACTCACCAGCCTTAATGATCTTCCTTGCTAT TGGCATTTCGGTTAAAGATGTTCCATAACACAATCCCCACGACCCTTTGTCCTGAGGTA AAAAATGACACCTTTGCCGTAGTCTCCCCCTGGACGGGAGCCTGTGGAAGTCCCGGGT GCTGGGAGGAATAGTAATTTCTGAGGCCTCGGACTCTGTCTCACTCTCTGATCGGATACC AATTCCTGACTGCTCTGTGGCAAATTTGGGGTGTCTTGTGCAAGTGTCTTTGCAAAAAC ACCAACTGTGGGCAAATCTGTCCACAAGACCAATAGCTTCATAGCCAACATCGGGGCC CAAATCACTCCAGAACATTGACTGATGCCAGTACGGCTAACAGCTCCAGTCATATTTTC TCCAGCCAATNTCCACTCACACAGCGTGATCATGGTGTCTACCCGCCTTCTTCCCAAT TTATATCGTAAAAGCCTGCAGCATCTCCTGCCACCCAAATGTTAAAGCGTGCTTGAGCT CTGCCTTTACCCCGAGCCACCCAAATCTGATCTATTTCCAGCA </pre>
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_145813
<b>Insert Size:</b>	2500 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).

**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\\_145813.1](#), [NP\\_665812.1](#)

**RefSeq Size:** 1354 bp

**RefSeq ORF:** 981 bp

**Locus ID:** 9131

**Cytogenetics:** Xq26.1

**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 (3) lacks several in-frame exons in the 5' coding region compared to variant 1, resulting in an isoform (3) that is 287 aa shorter than isoform 1.