

## Product datasheet for RC216357

### AIF (AIFM1) (NM\_145813) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	AIF (AIFM1) (NM_145813) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	AIFM1
Synonyms:	AIF; CMT2D; CMTX4; COWCK; COXPD6; NADMR; NAMSD; PDCD8
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RC216357 representing NM_145813 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCGCGATCGCC

ATGTTCCGGTGTGGAGGCTGGCGGGGTGCTTTGAAGCAGAAGCTGGTGCCCTTGGTGCGGACCGTGT  
GCGTCCGAAGCCCGAGGCAGAGGAACCGCTCCCAGCTCGAGCCTTGGGCACAGAAGTGATCAACTCTT  
CCCCGAGAAAGGAAATATGGGAAAGATCCTCCCGAATACCTCAGCAACTGGACCATGGAAAAAGTCAGA  
CGAGAGGGGGTTAAGGTGATGCCAATGCTATTGTGCAATCCGTTGGAGTCAGCAGTGGCAAGTTACTTA  
TCAAGCTGAAAGACGGCAGGAAGGTAGAAACTGACCACATAGTGGCAGCTGTGGGCTGGAGCCCAATGT  
TGAGTTGGCCAAGACTGGTGGCCTGAAATAGACTCAGATTTTGGTGGCTTCCGGGTAATGCAGAGCTA  
CAAGCACGCTCTAACATCTGGTGGCAGGAGATGCTGCATGCTTCTACGATATAAAGTTGGGAAGGAGGC  
GGGTAGAGCACCATGATCACGCTGTTGTGAGTGAAGATTGGCTGGAGAAAAATGACTGGAGCTGCTAA  
GCCGACTGGCATCAGTCAATGTTCTGGAGTGATTTGGCCCCGATGTTGGCTATGAAGCTATTGGTCTT  
GTGGACAGTAGTTGCCACAGTTGGTGTGTTTGCAAAAGCAACTGCACAAGACAACCCCAATCTGCCA  
CAGAGCAGTCAGGAAGTGGTATCCGATCAGAGAGTGAGACAGAGTCCGAGGCCCTCAGAAATTAATCTCC  
TCCCAGCACCCCGCAGTTCCACAGGCTCCCGTCCAGGGGAGGACTACGGCAAAGGTGTCATCTTCTAC  
CTCAGGGACAAAAGTGGTCGTGGGATTGTGCTATGGAACATCTTTAACCGAATGCCAATAGCAAGGAAGA  
TCATTAAGGACGGTGAGCAGCATGAAGATCTCAATGAAGTAGCCAAACTATTCAACATTCATGAAGAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC216357 representing NM\_145813  
 Red=Cloning site Green=Tags(s)

MFRCGGLAAGALKQKL VPLVVRTVCVRSRQRNRLPARALGTEVIQLFPEKGNMGKILPEYLSNWTMEKVR  
 REGVKVMPNAIVQSVGVSSGKLLIKLKDGRKVEDHIVAAGLEPNVELAKTGGLEIDSDFGGFRVNAEL  
 QARSNIWVAGDAACFYDIKLRRRRVEHHDHAVVSGRLAGENMTGAAKPYWHQSMFWSDLGPDVGYEAIGL  
 VDSSLPTVGVFAKATAQDNPKSATEQSGTGIRSESESEASEITIPPSTPAVPQAPVQGEDYGKGVIFY  
 LRDKVVVGIVLWNIFNRMPIARKIIKDGEQHEDLNEVAKLFNIHED

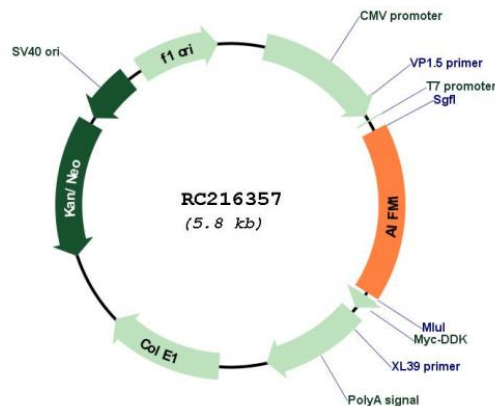
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**Plasmid Map:**



**ACCN:** NM\_145813

**ORF Size:** 978 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<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>	<a href="#">NM_145813.2</a>
<b>RefSeq Size:</b>	1354 bp
<b>RefSeq ORF:</b>	981 bp
<b>Locus ID:</b>	9131
<b>Cytogenetics:</b>	Xq26.1
<b>Protein Families:</b>	Druggable Genome, Transmembrane
<b>Protein Pathways:</b>	Apoptosis
<b>MW:</b>	35.5 kDa
<b>Gene Summary:</b>	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]