

## Product datasheet for **RG224064**

### **AIF (AIFM1) (NM\_004208) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	AIF (AIFM1) (NM_004208) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	AIFM1
Synonyms:	AIF; AUNX1; CMT2D; CMTX4; COWCK; COXPD6; DFNX5; NADMR; NAMSD; PDCD8; SEMDHL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG224064 representing NM\_004208  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGTTCCGGTGTGGAGGCTGGCGCGGGTCTTTGAAGCAGAAGCTGGTGCCCTTGGTGCGGACCGTGT  
 GCGTCCGAAGCCGAGGCAGAGGAACCGCTCCAGGCAACTTGTTCAGCGATGGCATGTTCTCTAGA  
 ACTCCAGATGACAAGACAATGGCTAGCTCTGGTGCATCAGGGGCAAAATCGATAAATTCTGTGTTAGTC  
 CTTATTGTGGCTTATCAACAGTAGGAGCTGGTGCCTATGCCTACAAGACTATGAAAAGAGGATGAAAAA  
 GATACAATGAAAGAATTCAGGGTTAGGGCTGACACCAGAACAGAAAAGGCGCGTTATCTGC  
 TTCAGAAGGAGAGGAAGTTCTCAAGACAAGGCGCAAGTCATGTTCTTTCTGCTAATTGGTGGAGGC  
 ACAGCTGCTTTTGTGCAGCCAGATCCATCCGGGCTCGGGATCCTGGGGCCAGGGTACTGATTGTATCTG  
 AAGATCCTGAGCTGCCGTACATGCGACCTCTTTCAAAGAAGTGTGGTTTTCCAGATGACCCAAATGT  
 CACAAAGACACTGCGATTCAAACAGTGAATGGAAAAGAGAGAAGCATATATTTCCAGCCACCTTCTTTC  
 TATGCTCTGCTCAGGACCTGCCTCATATTGAGAATGGTGGTGTGGCTGTCTCACTGGGAAGAAGGTAG  
 TACAGCTGGATGTGAGAGACAACATGGTAAAATTAATGATGGCTCTCAAATAACCTATGAAAAGTGCTT  
 GATTGCAACAGGAGTACTCCAAGAAGTCTGTCTGCCATTGATAGGGCTGGAGCAGAGGTGAAGAGTAGA  
 ACAACGCTTTTCAGAAAGATTGGAGACTTTAGAAGCTTGAGAAGATTTACGGGAAGTCAAATCAATTA  
 CGATTATCGGTGGGGGCTTCTTGGTAGCGAAGTGGCCTGTGCTCTTGGCAGAAAGGCTCGAGCCTTGGG  
 CACAGAAGTGATTCAACTTTCCCGAGAAAGGAAATATGGGAAAGATCCTCCCGAATACCTCAGCAAC  
 TGGACCATGAAAAAGTCAGACGAGAGGGGTTAAGGTGATGCCAATGCTATTGTGCAATCCGTTGGAG  
 TCAGCAGTGGCAAGTTACTTATCAAGCTGAAAGACGGCAGGAAGGTAGAAAAGTACCACATAGTGGCAGC  
 GTGGGGCTGGAGCCCAATGTTGAGTTGGCCAAGACTGGTGGCCTGGAATAAGACTCAGATTTTGGTGGC  
 TTCCGGGTAAATGCAGAGCTACAAGCACGCTCTAACATCTGGGTGGCAGGAGATGCTGCATGCTTCTACG  
 ATATAAAGTTGGGAAGGAGGCGGGTAGAGCACCATGATCACGCTGTTGTGAGTGGAAAGTTGGTGGAGA  
 AAATATGACTGGAGCTGCTAAGCCGACTGGCATCAGTCAATGTTCTGGAGTGAATTTGGGCCCGATGTT  
 GGCTATGAAGCTATTGGTCTTGTGGACAGTAGTTTGGCCACAGTGGTGTGTTTTGCAAAGCAACTGCAC  
 AAGACAACCCCAATCTGCCACAGAGCAGTCAGGAACTGGTATCCGATCAGAGAGTGAGACAGAGTCCGA  
 GGCCTCAGAAATTAATCTCTCCAGCACCCCGGAGTCCACAGGCTCCCGTCCAGGGGAGGACTAC  
 GGCAAAGTGTGATCTTCTACCTCAGGGACAAAGTGGTCTGGGGATTGTCTATGGAACATCTTTAAC  
 GAATGCCAATAGCAAGGAAGATCATTAAGGACGGTGGAGCAGCATGAAGATCTCAATGAAGTAGCCAACT  
 ATCAACATTCATGAAGAC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG224064 representing NM\_004208  
 Red=Cloning site Green=Tags(s)

MFRCGGLAAGALKQKLVPLVRTVCVRSRQRNRLPGNLFQRWHVPLELQMTRQMASSGASGGKIDNSVLV  
 LIVGLSTVGAGAYAYKTMKEDEKRYNERISGLGLTPEQKQKKAALSASEGEEVQDKAPSHVPPFLIGGG  
 TAAFAAARSIRARDPGARVLIVSEDPPELPMRPPLSKELWFSDDPNVTKLRFKQWNGKERSIYFQPPSF  
 YVSAQDLPHIENGGVAVLTGKKVVQLDVRDNMVKLNDGSQITYEKCLIAATGGTPRSLAIDRAGAEVKS  
 TTLFRKIGDFRSLEKISREVKSTITIIGGGFLGSELACALGRKARALGTEVIQLFPEKGNMGKILPEYLSN  
 WTMEKVRREGVKVMPNAIVQSVGVSSGKLLIKLKDGRKVEDHIVAAGVLEPNVELAKTGGLEIDSDFGG  
 FRVNAELQARSNIWVAGDAACFYDIKLRRRVEHHDHAVVSGRLAGENMTGAAKPYWHQSMFWSDLGPDV  
 GYEAIGLVDSSTPTVGVFAKATAQDNPKSATEQSGTGIRSESETESEASEITIPPSTPAVPQAPVQGEDY  
 GKGVI FYLRDKVVVGVIVLWNIFNRMPIARKIIKDGEQHEDLNEVAKLFNIHED

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

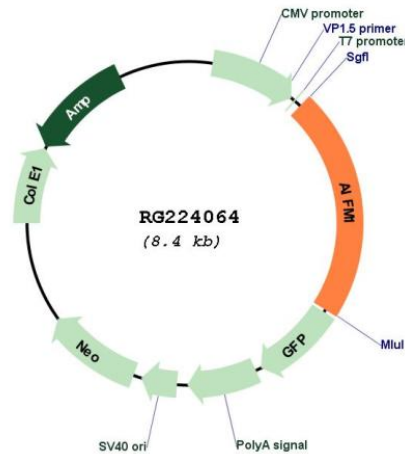
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM\_004208  
 ORF Size: 1839 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_004208.4</a>
<b>RefSeq Size:</b>	2215 bp
<b>RefSeq ORF:</b>	1842 bp
<b>Locus ID:</b>	9131
<b>UniProt ID:</b>	<a href="#">O95831</a>
<b>Cytogenetics:</b>	Xq26.1
<b>Domains:</b>	pyr_redox
<b>Protein Families:</b>	Druggable Genome, Transmembrane
<b>Protein Pathways:</b>	Apoptosis
<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]