

Product datasheet for **RG210668**

AIF (AIFM1) (NM_145812) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	AIF (AIFM1) (NM_145812) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	AIF
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:

>RG210668 representing NM_145812
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTTCCGGTGTGGAGGCTGGCGCGGGTGTCTTGAAGCAGAAGCTGGTGCCCTTGGTGCGGACCGTGT
 GCGTCCGAAGCCCGAGGCAGAGGAACCGGCTCCAGTTGTGCAGTCTCATCACCTAGGATCCCCTTCTAG
 ATCACTAGCATCTACAGGTGCTTCTGGGAAAGATGGCAGCAACCTAGTGTACTTCTTAATTGTAGGAGCA
 ACAGTCACTGGGGCAGGAGTTTATTATGCCTACAAGACTATGAAAGAGGACGAAAAAAGATACAATGAAA
 GAATTTACAGGTTAGGGCTGACACCAGAACAGAAAAGGCGCGTTATCTGCTTCAAGGAGAGA
 GGAAGTTCCTCAAGACAAGGCGCAAGTCACTGTTCTTCTGCTAATTGGTGGAGGCACAGCTGCTTTT
 GCTGCAGCCAGATCCATCCGGGCTCGGGATCCTGGGGCCAGGGTACTGATTGTATCTGAAGATCCTGAGC
 TGCCGTACATGCGACCTCTCTTCAAAGAAGTGTGGTTTTTCAGATGACCCAAATGTCACAAAGACT
 GCGATTCAAACAGTGAATGGAAAAGAGAGAAGCATATATTTCCAGCCACCTTCTTCTATGTCTCTGCT
 CAGGACCTGCCTCATATTGAGAAATGGTGGTGTGGCTGTCCTCACTGGGAAGAAGGTAGTACAGCTGGATG
 TGAGAGACAACATGGTGAACCTAATGATGGCTCTCAAATAACCTATGAAAAGTGCTTGATTGCAACAGG
 AGGTACTCCAAGAAGTCTGTCTGCCATTGATAGGGCTGGAGCAGAGGTGAAGAGTAGAACACGCTTTTC
 AGAAAAGATTGGAGACTTTAGAAGCTTGGAGAAGATTTACGGGAAGTCAAATCAATTACGATTATCGGTG
 GGGGCTTCTTGGTAGCGAAGTGGCCTGTGCTCTTGGCAGAAAGGCTCGAGCCTTGGGCACAGAAGTGT
 TCAACTCTTCCCCGAGAAAGGAAATATGGGAAAGATCCTCCCGAATACCTCAGCAACTGGACCATGGAA
 AAAGTCAGACGAGAGGGGGTTAAGGTGATGCCCAATGCTATTGTGCAATCCGTTGGAGTCAGCAGTGGCA
 AGTTACTTATCAAGCTGAAAGACGGCAGGAAGGTAGAAACTGACCACATAGTGGCAGCTGTGGCCTGGA
 GCCCAATGTTGAGTTGGCCAAGACTGGTGGCTGGAAATAGACTCAGATTTTGGTGGCTTCCGGGTAAT
 GCAGAGCTACAAGCACGCTCTAACATCTGGGTGGCAGGAGATGCTGCATGCTTCTACGATATAAAGTTGG
 GAAGGAGGCGGGTAGAGCACCATGATCACGCTGTTGTGAGTGGAAAGATTGGCTGGAGAAAATAGACTGG
 AGCTGCTAAGCCGTAAGTGGCATCAGTCAATGTTCTGGAGTGAATTTGGGCCCGATGTTGGCTATGAAGCT
 ATTGGTCTTGTGGACAGTAGTTTGGCCACAGTTGGTGTGTTTTGCAAAGCAACTGCACAAGACAACCCCA
 AATCTGCCACAGAGCAGTCAGGAAGTATCCGATCAGAGAGTGAGACAGAGTCCGAGGCGCTCAGAAAT
 TACTATCTCCAGCACCCCGGAGTTCACAGGCTCCCGTCCAGGGGGAGGACTACGGCAAAGGTGTC
 ATCTTCTACCTCAGGGACAAAGTGGTCTGTTGGGATTGTGCTATGGAACATCTTAAACCGAATGCCAATAG
 CAAGGAAGATCATTAAAGACGGTGGCAGCATGAAGATCTCAATGAAGTAGCCAAACTATTCAACATTCA
 TGAAGAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG210668 representing NM_145812
 Red=Cloning site Green=Tags(s)

MFRCGGLAAGALKQKLVPLVRTVCVRSRQRNRLPVVQSHHLGSPSRSLASTGASGKDGSNLVYFLIVGA
 TVTGAGVYYAYKTMKEDEKRYNERISGLGLTPEQKQKKAALSASEGEEVQDKAPSHVFPFLIGGGTAAF
 AAARSIRARDPGARVLIVSEDPPELPMRPPLSKELWFSDPNVTKLRFKQWNGKERSIYFQPPSFYVSA
 QDLPHIENGGVAVLTGKKVVQLDVRDNMVKLNDSQITYEKCLIATGGTTPRSLAIDRAGAEVKSRTTLF
 RKIGDFRSLEKISREVKSIITIGGGFLGSELACALGRKARALGTEVIQLFPEKGNMGKILPEYLSNWTME
 KVRREGVKVMPNAIVQSVGVSSGKLLIKLKDGRKVETDHIVAAVGLEPNVELAKTGGLEIDSDFGGFRVN
 AELQARSNIWVAGDAACFYDIKLGRRRVEHHDHAVVSGRLAGENMTGAAKPYWHQSMFWSDLGPDVGYEA
 IGLVDSLPTVGVFAKATAQDNPKSATEQSGTGIRSESETESEASEITIPPSTPAVPQAPVQGEDYKGV
 IFYLRDKVVVGIVLWNIFNRMPIARKIIKDGEQHEDLNEVAKLFNIHED

TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:


ACCN: NM_145812

ORF Size: 1827 bp

OTI Disclaimer: 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. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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_145812.1](#), [NP_665811.1](#)

RefSeq Size: 2203 bp

RefSeq ORF: 1830 bp

Locus ID: 9131

UniProt ID: [O95831](#)

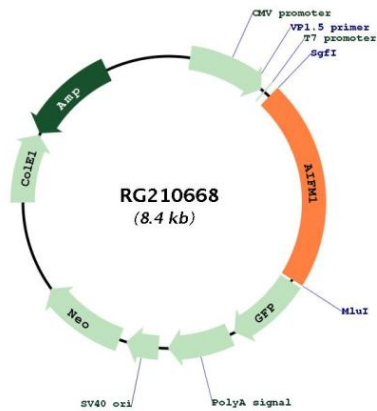
Cytogenetics: Xq26.1

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]

Product images:



Circular map for RG210668