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 SC325773

AIF (AIFM1) (NM_001130847) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	AIF (AIFM1) (NM_001130847) Human Untagged Clone
Tag:	Tag Free
Symbol:	AIF
Synonyms:	AIF; AUNX1; CMT2D; CMTX4; COWCK; COXPD6; DFNX5; NADMR; NAMSD; PDCD8; SEMDHL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>SC325773 representing NM_001130847. Blue=Insert sequence Red=Cloning site Green=Tag(s) GCTCGTTTAGTGAACCGTCAGAATTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTG GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC ATGTTCCGGTGTGGAGGCCTGGCGGCGGGTGCTTTGAAGCAGAAGCTGGTGCCCTTGGTGCGGACCGTG TGCGTCCGAAGCCCGAGGCAGAGGAACCGGCTCCCAGGCAACTTGTTCCAGCGATGGCATGTTCCTCTA GAACTCCAGATGACAAGACAAATGGCTAGCTCTGGTGCATCAGGGGGCAAAATCGATAATTCTGTGTTA GTCCTTATTGTGGGCTTATCAACAGTAGGAGCTGGTGCCTATGCCTACAAGACTATGAAAGAGGATGAA AAAAGATACAATGAAAGAATTTCAGGGTTAGGGCTGACACCAGAACAGAAACAGAAAAAGGCCGCGTTA TCTGCTTCAGAAGGAGAGGAAGTTCCTCAAGACAAGGCGCCAAGTCATGTTCCTTTCCTGCTAATTGGT GGAGGCACAGCTGCTTTTGCTGCAGCCAGATCCATCCGGGCTCGGGATCCTGGGGCCAGGGTACTGATT GTATCTGAAGATCCTGAGCTGCCGTACATGCGACCTCCTCTTTCAAAAGAACTGTGGTTTTCAGATGAC CCAAATGTCACAAAGACACTGCGATTCAAACAGTGGAATGGAAAAGAGAGAAGCATATATTTCCAGCCA CCTTCTTTCTATGTCTCTGCTCAGGACCTGCCTCATATTGAGAATGGTGGTGTGGCTGTCCTCACTGGG AAGAAGGTAGTACAGCTGGATGTGAGAGACAACATGGTGAAACTTAATGATGGCTCTCAAATAACCTAT GAAAAGTGCTTGATTGCAACAGGAGGTACTCCAAGAAGTCTGTCTGCCATTGATAGGGCTGGAGCAGAG GTGAAGAGTAGAACAACGCTTTTCAGAAAGATTGGAGACTTTAGAAGCTTGGAGAAGATTTCACGGGAA GTCAAATCAATTACGATTATCGGTGGGGGCTTCCTTGGTAGCGAACTGGCCTGTGCTCTTGGCAGAAAG GATATATGA ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
Restriction Sites:	SgfI-MluI
ACCN:	NM_001130847
Insert Size:	975 bp

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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).
OTI Annotation:	This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
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_001130847.3
RefSeq Size:	2492 bp
RefSeq ORF:	975 bp
Locus ID:	9131
UniProt ID:	O95831
Cytogenetics:	Xq26.1
Protein Families:	Druggable Genome, Transmembrane
Protein Pathways:	Apoptosis
MW:	35.4 kDa

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 (5) contains an additional internal exon, which results in a distinct 3' coding region and differences in the 3' UTR, compared to variant 1. The encoded isoform (AIFsh2, also known as AIFshort2) has a distinct C-terminus and is shorter than isoform AIF. CCDS Note: This CCDS represents the AIFsh2 isoform described in PMID:16644725. The transcript is a candidate for nonsense-mediated mRNA decay (NMD), but the protein is represented based on evidence for the endogenous protein in PMID:16644725.