

Product datasheet for **SC124819**

GFM2 (NM_170691) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GFM2 (NM_170691) Human Untagged Clone
Tag:	Tag Free
Symbol:	GFM2
Synonyms:	EF-G2mt; EFG2; hEFG2; mEF-G 2; MRRF2; MST027; MSTP027; RRF; RRF2; RRF2mt
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >OriGene ORF within SC124819 sequence for NM_170691 edited (data generated by NextGen Sequencing)

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ATGTTGACCAACTTGAGGATATTTGCAATGAGTCATCAGACAATACCCAGTGTGTATATT
AATAATATATGCTGCTATAAAATAAGAGCAAGTTTAAAAAGATTAAAGCCACATGTGCCG
CTTGGAAGAAATTGCAGTTCTCTACCAGGCTTAATAGGAAATGATATCAAATCCCTTCAT
TCCATCATCAATCCTCCCATAGCTAAAAATCCGTAATATTGGAATTATGGCTCATATTGAT
GCAGGCAAACTACCACCACAGAAAGAATATTGTACTATTCCGGATATACAAGATCACTG
GGAGATGTTGATGATGGAGACACAGTGACAGATTTCATGGCCCAAGAGCGAGAAAGAGGC
ATTACTATTCAATCAGCTGCTGTTACATTTGATTGGAAAGGTTATAGAGTCAATCTAATT
GATACACCAGGTCATGTGGACTTTACCTTGAGGTTGAGCGGTGCCTAAGAGTGTGGAT
GGTGCAGTGGCTGTATTTGATGCCTCTGCTGGTGTAGAGGCCAGACTCTCACAGTATGG
AGGCAAGCTGATAAACACAATATACCTCGAATCTGTTTTTAAACAAGATGGACAAAAT
GGAGCAAGCTTTAAGTATGCAGTTGAAAGCATCAGAGAGAAGTTAAAGGCAAAGCCTTTG
CTTTTACAGTTACCAATTGGTGAAGCCAAAATTTCAAAGGAGTGGTGGATGTAGTAATG
AAAGAAAACTTTCTTTGGAATTGCAATTCAAATGATGGAAAAGACTTTGAGAGAAAGCCC
CTCTTGGAATGAATGATCCTGAATTGCTGAAGGAAACAATGAAGCAAGGAATGCCTTA
ATTGAACAAGTTGCAGATTTGGATGATGAATTTGCTGACTTGGTTTTAGAGAATTTAGT
GAGAATTTTGATTGTTACAGCTGAAAAGCTACAGACTGCAATACATAGAGTGACACTA
GCTCAGACAGCAGTGCCTGTGCTTTGTGGAAGTGCCCTGAAAAACAAAGGATACAGCCC
TTGTTAGATGCTGTTACTATGTACTTACCTTCACTGAAGAGCGTAACTATGAATTTCTG
GAGAGAATAAGTCGTCTGCTTTTGCCGTTTGTGACCAACATGTAGAAATCCCTTCATTG
ACTGCTGGTAACATTGCTTTGACTGTTGGGCTTAAACATACTGCCACTGGAGACACCATT
GTCTCATCCAAGTCCAGTGCATTAGCTGCAGCTCGTAGAGCCGAACGGGAGGGAGAAAAG
AAGCACAGACAAAACAATGAAGCAGAGAGACTTTTATTGGCTGGAGTGGAGATTCCAGAA
CCTGTTTTCTTCTGTACCATAGAACCCCATCACTGTCTAAGCAGCCAGATTTGGAACAT
GCGTTGAAATGTCTTCAGCGTGAAGATCCAGTTTGAAAGTGAGGCTAGATCCTGACTCT
GGACAACTGTTCTGTGTGGTATGGGGAGTTACATATAGAGATTATTCATGATCGAATC
AAGAGGGAATATGGACTGGAGACCTATCTCGGCCTCTCCAGGTGGCATATCGAGAGACC
ATCCTAAACTCAGTTCGTGCCACAGATACCTTAGATAGAACTTTAGGAGACAAAAGGCAT
CTTGAGTGTAGAAAGTGAAGCAAGGCCAATTGAAACATCATCTGTTATGCCTGTGATT
GAGTTTGAGTATGCTGAAAGTATCAATGAAGGCCTTTTGAAGGTCTCCAAGAGGCCATT
GAAAATGGAATTCACAGCGCATGTCTCAAGGACCATTGCTTGGATCCCCAATTCAGGAT
GTAGCAATTACTTTACATTCCCTGACAATTCATCCTGGCACCTCCACAATATGATTTCT
GCCTGTGTCTCAAGATGCGTGCAAAAGGCTCTGAAGAAAGCTGATAAGCAAGTTTTGGAG
CCTCTGATGAATCTTGAGGTTACAGTAGCTAGAGATTATCTCAGCCCTGTCTGGCAGAT
CTGGCACAAGAAGAGGAAACATTCAGGAAATTCAGACTCGCCAGGACAACAAAGTTGTT
ATTGGATTTGTTCCCTTAGCAGAAATTATGGGTTATTCAACTGTGCTTCGAACGCTAACA
TCAGGCTCAGCTACTTTTGCCTTAGAACTATCTACTTATCAAGCCATGAATCCTCAAGAT
CAAAATACACTGCTCAACCGGAGAAGTGTTTGACCTAA

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Clone variation with respect to NM_170691.1

5' Read Nucleotide Sequence:	>OriGene 5' read for NM_170691 unedited <pre> AATACGACTCACTATAGGGCGGCCGCAATTCGGCACGAGGGGTGTGGCTGCCCGAGGCG GTAGAGCGGAGAAAGCCTATTTTCTTTTCGTTTAGAACATTGCCTTTGCCTAGGCTGGC GTCGAGACTTGAGGCCGTTGCAGACTTTGGCGCGGCTCGCGCCTCCTGCTTCAAGAGCCC AGCGGTGAGAGCTGGCCTGCGGCACGCGCCTAATGCCAGACAGTAACAGTTTGGAGGAT CAAGATGTTGACCAACTTGAGGATATTTGCAATGAGTCATCAGACAATACCCAGTGTGTA TATTAATAATATATGCTGCTATAAAATAAGAGCAAGTTTAAAAAGATTAAAGCCACATGT GCCGCTTGAAGAAATTGCAGTTCTCTACCAGGCTTAATAGGAAATGATATCAAATCCCT TCATTCCATCATCAATCCTCCCATAGCTAAAATCCGTAATATTGGAATTATGGCTCATAT TGATGCAGGCAAACTACCACCACAGAAAGAATATTGTACTATTCCGGATATACAAGATC ACTGGGAGATGTTGATGATGGAGACACAGTGACAGATTTCATGGCCCAAGAGCGAGAAAG AGGCATTACTATTCAATCAGCTGCTGTTACATTTGATTGGAAAGTTATAGAGTCAATCT AATTGATACACCAGGTCATGTGGACTTTACCTTGAGGTTGAGCGGTGCCTAANAGTGTT GGATGGTGCACTGGCTGTATTTGATGCCTCTGCTGGTGTAGAGGCCCAGACTCTCACAGT ATGGGAGGCAGCTGATAAACACATATACCTCGAATCTGTTNTTTAAACCAGATGGACAAA CTGGNAGCAGCTNNTAGTATGCAGTGAAGCTCAGAGAGAAGTAAAGGCAAGCCTTGCTTT TACAGTACCCATGGTGAAGCCAACTTNAAGAGTGTGGATGAGTATGAAGAAAACCTCTT TGGNATGCATCAATGATGGAAGACT </pre>
Restriction Sites:	NotI-NotI
ACCN:	NM_170691
Insert Size:	3000 bp
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).
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:	<u>NM_170691.1, NP_733792.1</u>
RefSeq Size:	2970 bp
RefSeq ORF:	2199 bp
Locus ID:	84340
UniProt ID:	<u>Q969S9</u>
Cytogenetics:	5q13.3

Gene Summary:

Eukaryotes contain two protein translational systems, one in the cytoplasm and one in the mitochondria. Mitochondrial translation is crucial for maintaining mitochondrial function and mutations in this system lead to a breakdown in the respiratory chain-oxidative phosphorylation system and to impaired maintenance of mitochondrial DNA. This gene encodes one of the mitochondrial translation elongation factors, which is a GTPase that plays a role at the termination of mitochondrial translation by mediating the disassembly of ribosomes from messenger RNA . Its role in the regulation of normal mitochondrial function and in disease states attributed to mitochondrial dysfunction is not known. Alternative splicing results in multiple transcript variants encoding distinct isoforms. [provided by RefSeq, Jul 2013]

Transcript Variant: This variant (2) lacks two alternate exons in the 5' coding region and initiates translation at a downstream start codon, compared to variant 4. It encodes isoform 2, which is shorter than isoform 4.