

Product datasheet for **MG225852**

Nfatc4 (NM_001168346) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Nfatc4 (NM_001168346) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Nfatc4
Synonyms:	3110041H08Rik; AW107667; AW546455; Nfat3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG225852 representing NM_001168346
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGGGCCGCAAGCTGCGAGGATGAGGAGCTGGAATTTAAGCTGGTGTTCGGAGAGAAAAGGAGCCCC
 CCCCGCTGGGCCCTGGGGTCTGGGGAAGAGCTGGACTCAGAGGATACCCTCCATGCTGTCGTTTGGC
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 GGCTCTCTAGAGATTACCCTCCACCAGAAGGCTTTGGGGCTATCGAGAGGCTGGAGGTGAGGGCGGAG
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 GAGGTGGGGCCAGGCTATACCCCTGGGGAGGGGCTTCGGAGCAGGAGAAAGCCAGGGGTGGCTACAGCA
 GCGGCTTCAGAGACAGTGTACCTATCCAGGGTATACCCTGGAGGAAGGTGGGTGTGGGACTGGGGGCTG
 CGAGTGAAG

AGCGGACCGACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG225852 representing NM_001168346
 Red=Cloning site Green=Tags(s)

MGAASCEDEEELFKLVFGEEKEPPPLGPGGPEELDSEDTPPCCRLALGEPLPYGAAPIGIPRPPPPRPG
 MHSPPPRPAPSPGTWESQPARSVRLGGPGNAGGAGGRVLECPsirITSISPTPDPTSETWGD
 GSPRDYPPPEFGGYYREAGGQGGGAFFSPSPGSSLSWSFFSDASDEAALYAACDEVESELNEAASRFG
 LSSPLSPRASRPWPTEDPWSLYGPSSGGRAPEDSWLLLAPGPVVPASPRPASPCGKRRYSSTGTPSSA
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 EEEAANRLQSSEVTLTLTIPEYSNKRVSrpvQVYFYVSNRRKRSPtQSFKFLPVVFKKEPLDSSLRG
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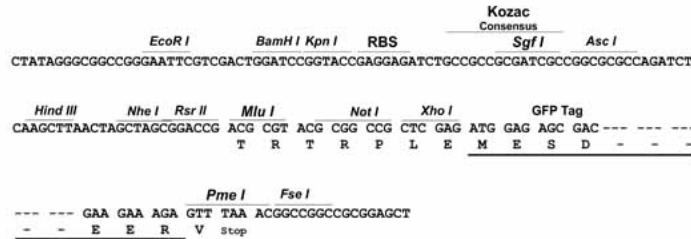
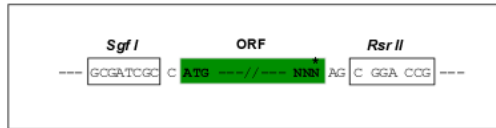
SGPTRRRLE - GFP Tag - V

Restriction Sites:

SgfI-RsrII

Cloning Scheme:

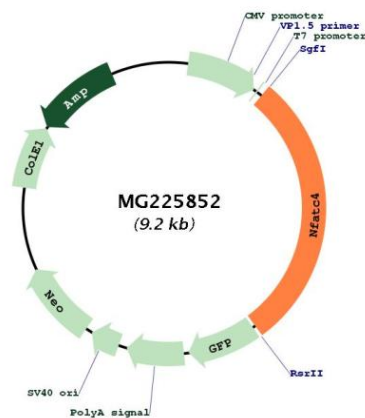
Cloning sites used for ORF Shuttling:



ACCN:	NM_001168346
ORF Size:	2670 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:	<ol style="list-style-type: none"> 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_001168346.1 , NP_001161818.1
RefSeq Size:	4036 bp
RefSeq ORF:	2673 bp
Locus ID:	73181
UniProt ID:	Q8K120
Cytogenetics:	14 C3

Gene Summary:

Ca(2+)-regulated transcription factor that is involved in several processes, including the development and function of the immune, cardiovascular, musculoskeletal, and nervous systems. Involved in T-cell activation, stimulating the transcription of cytokine genes, including that of IL2 and IL4 (PubMed:17198697). Along with NFATC3, involved in embryonic heart development (PubMed:12750314, PubMed:17198697). Involved in mitochondrial energy metabolism required for cardiac morphogenesis and function (PubMed:12750314). Transactivates many genes involved in heart physiology. Along with GATA4, binds to and activates NPPB/BNP promoter (PubMed:9568714). Activates NPPA/ANP/ANF and MYH7/beta-MHC transcription (By similarity). Binds to and transactivates AGTR2 gene promoter (PubMed:17198697). Involved in the regulation of adult hippocampal neurogenesis. Involved in BDNF-driven pro-survival signaling in hippocampal adult-born neurons. Involved in the formation of long-term spatial memory and long-term potentiation (PubMed:22586092). In cochlear nucleus neurons, may play a role in deafferentation-induced apoptosis during a developmental critical period when auditory neurons depend on afferent input for survival (PubMed:18354019). Binds to and activates the BACE1/Beta-secretase 1 promoter, hence may regulate the proteolytic processing of the amyloid precursor protein (APP). Plays a role in adipocyte differentiation. May be involved in myoblast differentiation into myotubes (By similarity). Binds the consensus DNA sequence 5'-GGAAAAT-3' (Probable). In the presence of CREBBP, activates TNF transcription. Binds to PPARG gene promoter and regulates its activity (By similarity). Binds to PPARG and REG3G gene promoters (PubMed:17198697). [UniProtKB/Swiss-Prot Function]

Product images:

Circular map for MG225852