

Product datasheet for **RN213834**

Nfatc4 (NM_001107264) Rat Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Nfatc4 (NM_001107264) Rat Untagged Clone
Tag:	Tag Free
Symbol:	Nfatc4
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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Fully Sequenced ORF: >RN213834 representing NM_001107264
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGGGCGGCAAGCTGCGAGGATGAGGAGCTGGAATTTAAGCTGGTGTTCGGGGAGAAAAGGAGGCC
 CCCGCTGGGCCCTGGGGCCCTGGGAAGAGCTGGACTCGGAGGATGCCCTCCGTGCTGCTTTGGC
 CCTGGGGAAACCCTTCCTTATGGTGTGCCCTATTGGTATCCCGACCCCCACCCCTCGGCCAGGG
 ATGCACTACCACCACCCGTCCTGCCCTCACCTGGCACCTGGGAGAGCCAGCCACCTCGGTGCGTGA
 GGCTGGGGGCCAGGAGGCACTGCGGGGGTACTGGGGCGGTGCTGTTCTTGTAGTGTCCAGCATCCG
 GATCACCTCTATCTCCACGCCTGACCACCGACCTACTAGAGGATGCTCCTGAAACTTGGGGGAC
 GGCTCTCTAGAGATTACCCTCCACCAGAAGGCTTTGGGGCTACCGAGAGGCTGGAGGTCAGGGCGGAG
 GAGCCTTCTCAGCCGAGCCCTGGCAGCAGCAGCTGTCTTCTGGAGCTTCTTCTGATGCCTCAGA
 CGAGGCAGCCCTGTATGCAGCATGCGACGAAGTGGAGTCTGAACCTAATGAAGCAGCCTCTCGTTTCGGC
 TTGAGCTCTCACTGCCCTCGCCCCGGGCTTCTCTAGGCCATGGACCCCGGAGGATCCGTGGAGCCTAT
 ATGGTCCAAGCTCCGGAGGCCGAGCGCCAGAGGATAGCTGGTACTTCTCAGCGCTCCTGGGCCATCCC
 AGCCTCCCCTCGGCTGCTTCTCCCTGCGGCAAGCGGCGCTATTCCAGTCCGGAACCCCATCTTCGGCC
 TCCCCAGCTTTGTCCCGCGGGGTAGCCTTGGGAAGAGGGTCCAGAGCCACCTCCACCACCCCATTCG
 CTCTGGTCCGGGACCCTAGTTCCTCTGGCCCTTTTGACTATGTGGGTGCTCCACCAACCGAGAGCGTCCC
 TCAGAAAACAGGAGGACTTCTAGCGAGCAAGCAGTGGCCTTGCCTCGGTCTGAGGAGCCTGCCTCGTGC
 AATGGGAAGTGCCTCTGGTACAGAGGACTCCGTGGCTGCTCCGCGGCTCTGCGGAAAGAGATGGCTG
 CATGGATTACTTAGCAGTTCCCTTCCCTCGCTTGGTCCAAGGCCGATTGGGGGACACAGCCCAT
 CTTCAGGACTCTGCCCTACCTCCCTGGACTGGCCTTTACCCAGCCAGTACGAGCAGCTGGAGCTGAGG
 ATTGAGGTGCAGCCAGAGCTCACCCAGCTCATTATGAGACTGAGGGCAGCCGGGAGCTGTCAAAG
 CTGCTCCTGGAGGTCACCCTGTGGTCAAGCTCCTAGGCTACAATGAGAAGCCATTGACTCTTCAGATGTT
 CATTGGCACTGCAGACGAGAGGAGCCTGCGGCCCATGCCTTCTACCAGGTGCACCGGATCACTGGCAAG
 ATGGTGGCTACAGCCAGCTATGAAGCTGTAGTCACTGTTAAAGTGTGGAGATGACTTTGCTCCAG
 AGAACAACATGGCTGCCAACATTGACTGTGCTGGAATCCTGAAGCTTCGGAATTCAGACATTGAGCTACG
 GAAGGGCAGACAGACATCGGGCGAAAAACACACGTGTGCGACTGGTGTCCGTGTGCATGTGCCTCAG
 GCGGGCGGAAGGTGCTCTGTGCAAGCAGCATCGGTGCCATCGAGTGTCCAGCGCTCAGCCAGG
 AGCTGCCCAAGTGGAGGCTACAGCCCAAGTGCCTGCTCCGTGAGAGGAGGGGAGGAGCTAGTGTGAC
 TGGATCCAATTCCTGCCAGACTCTAAAGTGGTGTTCATTGAGAGGGGCCCTGATGGAAAATGCAGTGG
 GAGGAAGAGGCCGAGTGAACCGGCTGCAGAGCAGTGGGTGACTGACTCTGACCATCCCTGAGTACA
 GCAACAAGCGGTGTCCCGCCAGTCCAGGTCTACTTTTATGTCTCCAATGGGCGGAGGAAGCGCAGTCC
 CACCCAAAGTTTCAAGTTCCTGCCTGTGATCTTCAAGGAGGAGCCCTACCAGACTCATCTCTCCGGGGC
 TTCCCTTCCACATCGGGTCCCCCTTTGGCCCCGACATGGACTTCTACCGCCAGGCCCCCTTATCCCT
 CCTATCCCATGAAGACCCTGCTTATGAGACTCCTTATCTGTGAGAAGGCTTTGGTTATAGCACACCCGC
 TCTGTACCCCCAGACAGGGCCCCACCGTCTTATAGACTGGCCTACGGATGTTCCCTGAGACTGGGGT
 ACCACAGGTTGTGCCCGCTACCTTCAGTCTCCTTTCTCCGCGCCCTTCTCTGGTGATCAGTATGGAG
 GACAGGGCTCCTTTTTCCCTGGGGCTTCCATTCTCCCTCCGCCCCCTTTAGGCTCCATTACCTTC
 CTCCCCACTCGAAGACCCCTTTAACCCAGAGTGTGTCCACCCCTTACTGCTGAGGGCTACAAT
 GAGGTGGGGCAGGCTATACCCCTGGGGAGGGGCTTCGGAGCAGGAGAAATCCAGGGGTGGCTACGGCA
 GCGGCTTCAGAGACAATGTGCCTATCCAGGATACCCCTGGAGGAAGTGTGAGATCATTGGCCGAGA
 CCTGAGTGGCTCCTGCACGTCTGGAGAAGAGCCTCCTGCC**TGA**

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI
ACCN: NM_001107264

Insert Size:	2706 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:	<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:	<u>NM_001107264.1</u> , <u>NP_001100734.1</u>
RefSeq Size:	3170 bp
RefSeq ORF:	2706 bp
Locus ID:	305897
UniProt ID:	<u>D3Z9H7</u>
Cytogenetics:	15p13

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:12370307). Along with NFATC3, involved in embryonic heart development. Involved in mitochondrial energy metabolism required for cardiac morphogenesis and function. 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 (PubMed:19026640). Binds to and transactivates AGTR2 gene promoter. 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. 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 (By similarity). 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' (By similarity). 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 (By similarity). [UniProtKB/Swiss-Prot Function]