

## Product datasheet for **RR213834**

### **Nfatc4 (NM\_001107264) Rat Tagged ORF Clone**

#### **Product data:**

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



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**ORF Nucleotide Sequence:**

>RR213834 representing NM\_001107264  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

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 CCTGAGTGGTTCCTGCAGCTCTGGAGAAGAGCCTCCTGCC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RR213834 representing NM\_001107264  
 Red=Cloning site Green=Tags(s)

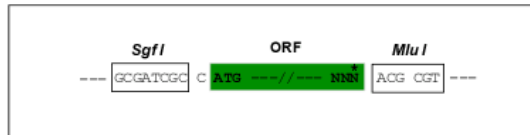
MGAASCEDEEELFKLVFGEEKEAPPLGPGGPEELDSEDAPPCCRLALGEPLPYGAAPIGIPRPPPPRPG  
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 EEEAANRLQSSEVTLTLTIPEYSNKRVSRPVQVYFYVSNRRRSPTQSFKFLPVIFKEEPLDSSLRG  
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 EVGPGYTPGEGASEQEKSRGGYSGFRDNVPIQGITLEEVSEIIGRDLSGFPARPGEEPPA

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**Restriction Sites:** Sgfl-MluI

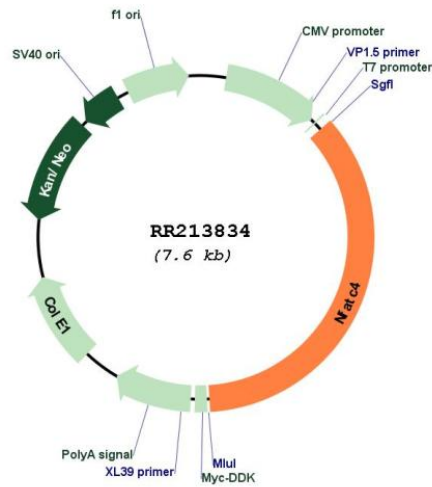
Cloning Scheme:

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

Plasmid Map:



<b>ACCN:</b>	NM_001107264
<b>ORF Size:</b>	2703 bp
<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_001107264.1</a> , <a href="#">NP_001100734.1</a>
<b>RefSeq Size:</b>	3170 bp
<b>RefSeq ORF:</b>	2706 bp
<b>Locus ID:</b>	305897
<b>UniProt ID:</b>	<a href="#">D3Z9H7</a>
<b>Cytogenetics:</b>	15p13
<b>MW:</b>	95.8 kDa

**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]