

Product datasheet for **SC101076**

NFAT2 (NFATC1) (NM_172390) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NFAT2 (NFATC1) (NM_172390) Human Untagged Clone
Tag:	Tag Free
Symbol:	NFAT2
Synonyms:	NF-ATC; NF-ATc1.2; NFAT2; NFATc
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL6</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >OriGene ORF within SC101076 sequence for NM_172390 edited (data generated by NextGen Sequencing)

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ATGCCAAGCACCAGCTTTCCAGTCCCTTCCAAGTTTCCACTTGGCCCTGCGGCTGCGGTC
TTCGGGAGAGGAGAACTTTGGGGCCCGCGCCGCGCGCCGGCGGACCATGAAGTCAGCG
GAGGAAGAACACTATGGCTATGCATCCTCCAACGTCAGCCCCGCCTGCCGCTCCCCACG
GCGCACTCCACCTGCCGGCCCCGTGCCACAACCTTCCAGCTCCACACCGGGCATCATC
CCGCCGGCGGATCACCCCTCGGGGTACGGAGCAGCTTTGGACGGTGGGCCCGGGCTAC
TTCTCTCTCCGGCCACACCAGGCTGATGGGGCCCTGCCCTGGAGAGTCTCGCATC
GAGATAACCTCGTGCTTGGGCTGTACCACAACAATAACCAAGTTTTTCCACGATGTGGAG
GTGAAGACGTCCTCCTAGCTCCAACGGTCCCCCTCCACGGCCACGCTGAGTCTGCC
AGCCTGGAGGCTACAGAGACCCCTCGTGCCTGAGCCCGCCAGCAGCCTGTCTCCCGG
AGCTGCAACTCAGAGGCTCCTCTACGAGTCCAACACTACTGACCCGTACGCGTCCCC
CAGACGTGCCATGGCAGTCTCCTGCGTGTCTCCAAGACCACGGACCCCGAGGAGGGC
TTTCCCCGCGGGCTGGGGCCTGCACACTGCTGGGTCCCCGCGCACTCCCCCTCCACC
TCGCCCCGCGCCAGCGTCACTGAGGAGAGCTGGTGGGTGCCGCTCCTCCAGACCCGCG
TCCCCGTGCAACAAGAGGAAGTACAGCCTCAACGCGCCGAGCCGCCCTACTCACCCAC
CACTCGCCACGCGTCCCCGCACGGCTCCCCGCGGGTACGCGTGACCGACGACTCGTGG
TTGGGCAACACCACCCAGTACACCAGCTCGGCCATCGTGGCCGCATCAACGCGTGACC
ACCGACAGCAGCCTGGACCTGGGAGATGGCGTCCCTGTCAAGTCCCGCAAGACCACCTG
GAGCAGCCGCCCTCAGTGGCGCTCAAGGTGGAGCCCGTGGGGAGGACCTGGGCAGCCCC
CCGCCCCGCGGACTTCGCGCCGAAGACTACTCCTTTTCCAGCACATCAGGAAGGGC
GGCTTTCGCGACCAGTACCTGGCGGTGCCGACACCCCTACCAGTGGGGAAGCCCAAG
CCCTGTCCCCTACGTCCTACATGAGCCGACCCCTGCCCGCCCTGGACTGGCAGTGGCG
TCCCACTCAGGCCGTATGAGCTTCGGATTGAGGTGACGCCAAGTCCCACCACCGAGCC
CACTACGAGACGGAGGGCAGCCGGGGCCGTGAAGGCGTCGGCCGGAGGACACCCCATC
GTGACGCTGCATGGCTACTTGGAGAATGAGCCGCTGATGCTGCAGCTTTTCATTGGGACG
GCGGACGACCGCTGCTGCGCCCGCACGCCTTCTACCAGGTGCACCGCATCACAGGGAAG
ACCGTGTCCACCACCAGCCACGAGGCCATCCTCTCCAACACCAAAGTCTGGAGATCCCA
CTCCTGCCGAGAACAGCATGCGAGCCGTCATTGACTGTGCCGAATCCTGAAACTCAGA
AACTCCGACATTGAACTTCGAAAGGAGAGACGGACATCGGGAGGAAGAACACACGGGTA
CGGCTGGTGTTCGCGTTCACGTCCCGCAACCCAGCGGCCGACGCTGTCCCTGCAGGTG
GCCTCAAACCCCATCGAATGCTCCAGCGCTCAGCTCAGGAGTGCCTCTGGTGGAGAAG
CAGAGCACGGACAGCTATCCGGTCTGGGCGGGAAGAAGATGGTCTGTCTGGCCACAAC
TTCTGTGACGACTCCAAGGTCATTTTCGTGGAGAAAGCCAGATGGCCACCATGTCTGG
GAGATGGAAGCGAAAACCTGACCGGGACCTGTGCAAGCCGAATTCTCTGGTGGTTGAGATC
CCGCCATTTCCGAATCAGAGGATAACCAGCCCCGTTACGTCAGTTTCTACGCTGCAAC
GGGAAGAGAAAGCGAAGCCAGTACCAGCGTTTACCTACCTTCCCGCCAACGGTAACGCC
ATCTTTCTAACCGTAAGCCGTGAACATGAGCGCGTGGGGTCTTTTTCTAA

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Clone variation with respect to NM_172390.1
786 t=>g

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_172390 unedited
 NGAAGGAAAAAGGCCAACACCACCCTTATACANNNGTTTTTACACCCGCCGTACCC
 GCATAGGGCGGTAGGCGTGTCCGGTGGNGAGTCTATAAAGCAGAGCTCATTTAGGTGAC
 ACTATAGAATAACAAGCTACTTGTCTTTTTGCAGCGGCCGGAATTCGGCACGAGAACT
 CGCCGGCGGAGTCGCCGCGCCAGATCCCAGCAGCAGGGCGCGGGCACCGGGGCGCGGGCA
 GGGCTCGGAGCCACCGCGCAGGTCTAGGGCCGCGGGCCCGCCACGCGCGCACAC
 GCCCCTCGATGACTTTCTCCGGGGCGCGGGCGCTGAGCCCGGGGCGAGGGCTGTCTTC
 CCGGAGACCCGACCCCGGCAGCGCGGGGCGCCGCTTCTCTGTGCCTCCGCCCGCCGCT
 CCACTCCCGCCCGCCGCGCGGATGCCAAGCACCAGCTTTCAGTCCCTTCCAAGTTT
 CCACTTGCCCTGCGGTGCGGTCTTCGGGAGAGGAGAACTTTGGGGCCCGCGCCGCGC
 GCCGGCGCACCATGAAGTCAGCGGAGGAAGAACAATATGGCTATGCATCCTCCAACGTC
 AGCCCCGCTGCCGCTCCACGCGCACTCCACCCTGCCGGCCCGTCCACAACCTT
 CAGACCTCACACCGGCATCATCCCGCCGGCGATACCCTCGNGTACGGAGCAGCT
 NTGGACGGTGGGCCCGCGGGCTACTTCTCTCCTCCGGCCACACCAGGCCTGATGGNGCC
 CCTGCCCTGGAGAGTCTCGCATCGAGTAACCTCGTGCTTGGGCTGTACCACAACAAT
 AACCAGTTNTCCACGATGTGGNAGGTGGGAGACGTCCTCCCTAGCTCCAACCGTCCCC
 CTCACGCGCCACGCTGAATCTGCCCAA

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_172390 unedited
 GAAAATCAGGTACCGTGCCGAATCGAGGATTNGTTTTTTTTCTTTTTTTTAAAAGCAA
 AGTTTATTCCTAAAGTGCCTGCAAAATAGCTATACCTATTTGCCTTTTACCCTAAGCAG
 CTTTAGGGTGAAATGCACACCAGGACCCCTCAGTTTTTTGGAGCAGAAGGCCATGTT
 TTCCCCTTGGCTGTTATACATTCGCAAGAAGCAAATATCCGTGACTATCTGAGTATGCA
 ACCCCCGCCCCACCCCAACAGGGATCAAGGAAAATGCATCCGAAGCTTCCCTTTTCC
 TTTCTTTTACAGGGCATCGATGGCTCGGTCTACTAACGGGACATCACACAGTTAAATGT
 GCAACACGCCACGCTGCTTACGGCGACGTCGTTTCTGCGTCTTTAGAAAAAGCACCCCA
 CGCGCTCATGTTACGGCTTACGGTTAGAAAGATGGCGTTACCCTTGGCGGAAGGTAGG
 TGAAACGCTGGTACTGGCTTCGCTTTTCTTCCCGTTGCAGACGTAGAACTGACGTGAA
 CGGGCTGGGTATCCTCTGATTCGAAATGGCGGGATCTCAACCACCAGAGAATCCGCT
 TGCACAAGGCCCGGGAAGTTTTCGCTTTCATCTCCAGACATGGTGGCCATCTGGGGCT
 TTCTCACGAAAAATACCCTTGGAGTCTCGCAGAAAGTTTTGGGCAGAAAAGACCATTTT
 CTTTCCGCCACGACCGGATAGCTGGCCGTGCTTTTGTTCACCAAAGCAGCTTCTCT
 GGACTTGAGCCTGGGAGCATTGTTGGGGTTGGAGGCCCTCTGTGGGACAACCTTCCG
 GCCCTTGTGTTGCGGGACCTTTACACCGGAAAACCAGCCGTCCCCGGGGTTTTTTTTTC
 CGATTGGGGTTTTTCTTTTCCAAGATAC

Restriction Sites:

NotI-NotI

ACCN:

NM_172390

Insert Size:

2300 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

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_172390.1](#), [NP_765978.1](#)

RefSeq Size: 3140 bp

RefSeq ORF: 2151 bp

Locus ID: 4772

UniProt ID: [O95644](#)

Cytogenetics: 18q23

Protein Families: Druggable Genome, Transcription Factors

Protein Pathways: Axon guidance, B cell receptor signaling pathway, Natural killer cell mediated cytotoxicity, T cell receptor signaling pathway, VEGF signaling pathway, Wnt signaling pathway

Gene Summary:

The product of this gene is a component of the nuclear factor of activated T cells DNA-binding transcription complex. This complex consists of at least two components: a preexisting cytosolic component that translocates to the nucleus upon T cell receptor (TCR) stimulation, and an inducible nuclear component. Proteins belonging to this family of transcription factors play a central role in inducible gene transcription during immune response. The product of this gene is an inducible nuclear component. It functions as a major molecular target for the immunosuppressive drugs such as cyclosporin A. Multiple alternatively spliced transcript variants encoding distinct isoforms have been identified for this gene. Different isoforms of this protein may regulate inducible expression of different cytokine genes. [provided by RefSeq, Jul 2013]

Transcript Variant: This variant (1) lacks two exons and its transcription extends past a splice site that is used in variant 6, which results in a novel 3' coding region and 3' UTR, compared to variant 6. The encoded isoform (A) is shorter and has a distinct C-terminus, compared to isoform F.