

Product datasheet for **MR225881**

Nfkb2 (NM_001177369) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Nfkb2 (NM_001177369) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Nfkb2
Synonyms:	lyt; NF-kappaB2; p49; p49/p100; p50B; p52
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide
Sequence:

>MR225881 representing NM_001177369
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGACAATTGCTACGATCCAGGCTGGATGGCATCCCCGAATATGATGATTTTGAATTCAGCCCCTCCA
 TCGTGGAGCCTAAGGATCCAGCCCTGAGACAGCTGATGGCCCTATCTGGTGATTGTGGAACAGCCCAA
 ACAGCGAGGCTTCAGATTTTCGATATGGCTGTGAAGGCCCTCCCATGGAGGTTTGCAGGTGCCTCCAGT
 GAGAAGGGCCGGAAGACCTATCCTACTGTCAAGATCTGTAACATGAGGGACCGCCAAGATTGAGGTGG
 ACCTGGTGACACACAGTGACCCACCTCGTGCATGCCACAGTCTGGTGGCAAGCAGTGTTCAGAGTT
 GGGAGTGTGCGCTGTGTCTGTAGGACCAAGGACATGACTGCTCAATTTAATAATCTGGGTGCTCGCAT
 GTAACCAAGAAGAACATGATGGAGATTATGATCCAGAACTTCAGAGGCAGCGTCTCCGCTCCAAGCCTC
 AGGGCCTTACAGAGGCTGAGCGCGGGAGCTAGAGCAGGAGGCCAAGGAGCTGAAGAAAGTCATGGATCT
 GAGCATTGTACGGCTGCGCTTCTCAGCTTTCCTTCGAGCTAGCGATGGCTCCTTCTCCTTGGCCCTGAAG
 CCTGTGATCTCCAGCCCATCCATGACAGCAAGTCTCCAGGGCCTCGAACCTGAAGATCTCCCGAATGG
 ACAAGACAGCGGGTTCCTGTGCGCGTGGAGACGAAGTTTATTTGCTCTGTGATAAGGTGCAAAAAGACGA
 CATTGAGGTTTCGTTCTATGAGGATGATGAGAATGGATGGCAAGCCTTTGGGGACTTCTCTCCACAGAC
 GTTCATAAACAGTATGCCATTGTGTTCCGGACACCGCCATCACAAGATGAAGATCGAGAGGCCTGTAA
 CGGTGTTCTGACAGTGAAACGCAAGCGTGGGGCGATGTCTCGGACTCCAAACAGTTACATATTACCC
 TCTGGTGAAGACAAGGAGGAAGTGCAGAGGAAGCGGAGAAAGGCCTTGGCCACCTTCTCCAGCCCTTC
 GGGGGCGGATCCACATGGTGGAGTTCGGGGCTCCGCTGGGGTTATGGAGCGCTGGAGGAGGTG
 GCAGCTCGGCTTTTCTCCTCCTCTTGGCTACAACCCCTACCAATCCGGTGCAGCCCAATGGGCTG
 CTATCCGGGTGGGGAGGTGGAGCGCAGATGGCCGTTCTAGACGGGACACCGATGCTGGCGAGGGGCA
 GAGGAGCCAGGACGCCCGGAGGCTCCCGAGGCGAACACAGGCCCTTGACACACTGCACGAGGCTC
 GCGAGTACAACGCGCGCTGTTCCGTTGGCGCAGCGCAGCGCCGAGCGTTGCTGGACTACGGCGTCAC
 CGCAGACGCGCTGCTGCTAGCGGGACAGGCCACCTGCTGATGGCACAGGACGAGAACGAGACACG
 CCACTGCACCTGGCCATCATCCATGGGCAGACTGGTGTCTTGGCAGATAGCCACGTCATTTATCACG
 CTCAGTACCTCGGCGTCATCAACCTCACCAACCACCTGCACCAGACGCTCTGCACCTGGCGGTAATCAC
 TGGGCAGACAAGGTGGTGAAGTTCCTGCTGCAGGTGGTGCAGCCCCAGGCTGTTGCAGGACTGTTGCGCA
 GACTCCGCCCTCACTTGGCTCTCGGGCAGGTGCTGCAGCCCCAGGCTGTTGCAGGACTGTTGCGCA
 GCGGAGCCATGCTGTGCCCAAATATTGCACATGCCTGATTTTGAGGGACTATACCCTGTACACCTGGC
 AGTCCATGCCGAAGCCCTGAGTGCCTGGATCTGTTAGTTGACTGTGGAGCTGAAGTGGAGGCCCCAGAG
 AGGCAAGGGGGCCGAAGTGCCTGATCTAGCCACAGAGATGGAGGAGTTGGGGCTGGTCACCCATCTAG
 TCACCAAGCTCCATGCTAATGTGAATGCCCGGACCTTTGCTGGAAACACACCCCTCCACCTGGCAGCTGG
 ACTCGGTCGCCAACTCTTACTCGCTCCTTCTAAAGGCTGGTGTGACATCCATGCAGAGAATGAGGAG
 CCTCTGTGCCCGCTGCCCTCACCTCGACCTCTGGGAGCGACTCCGACTCTGAAGGGCTGAGAGGGATA
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 AAATGCTGCTCAGAACACCACGGAGCCACCCCTGGCCCCACCCAGCCCTGCAGGGCCAGGGCTGTCCTG
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 CATGAGGGAGTCAAGGCTGCTGAAAGTCTGAGACCCGCGACAAGCTGCCAGCAGAGGTGAAAGAAG
 ACAGTGCCTATGGGAGCCAGTCAAGTGGAGCAGGAGGCAGAGAAGCTGTGTCCACCCCTGAGCTCCAGG
 AGGGCTCTGCCACGGGACCCCCAGCCTCAGGTGCAC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR225881 representing NM_001177369
 Red=Cloning site Green=Tags(s)

MDNCYDPLDGIPEYDDFEFSPSIVEPKDPAPETADGPYLVIVEQPKQGRFRFRYGCEGPSHGGLPGASS
 EKGRKTYPTVKICNYEGPAKIEVDLVTHSDPPRAHSLVGKQCSELGVCASVSGPKDMTAQFNNLGVLH
 VTKKNMMEIMIQLQRQLRQRLRSKPQGLTEAERRELEQEAKELKKVMDLSIVRLRFSAFLRASDGSFSLPLK
 PVISQPIHDSKSPGASNLKISRMDKTAGSVRGGDEVYLLCDKVQKDDIEVRFYEDDENGWQAFGDFSPD
 VHKQYAIVFRTPPYHKMKIERPVTVFLQLKRKRGGDVSDSKQFTYYPLVEDKEEVQRKRRKALPTFSQPF
 GGGSHMGGGSGGSAGGYGGAGGGSLGFFSSSLAYNPYQSGAAPMGCPYGGGGGAQMAGSRRDTDAGEGA
 EEPRTPEAPQGEPAALDTLQRAREYNARLFGLAQRSARALLDYGVADARALLAQRRHLLMAQDENGDT
 PLHLAIHQGTGVEQIAHVIYHAQYLVINLTNHLHQTPHLAVITGQTRVVSFLLQVGADPTLLDRHG
 DSALHLALRAGAAPELLQALLRSGAHAVPQILHMPDFEGLYPVHLAVHARSPECLDLLVDCGAEVEAPE
 RQGRTALHLATEMEELGLVTHLVTKLHANVNARTFAGNTPLHLAAGLSPTLTRLLKAGADIHAENEE
 PLCPLPSPSTSGSDSDSEGPEDTQRNFRGHTPLDLTCSTKVKTLLLNAQNTTEPPLAPPSPAGPGLSL
 GDAALQNLQQLLDGPEAQGWAELAERLGLRSLVDTYRKTSPSPGSLRLSYKLAGDLVGLLEALSDMGL
 HEGVRLKGPETRDKLPSTEVKEDSAYGSQSVEQAEKLCPPPEPPGGLCHGHPQPQVH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mm9094_f12.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

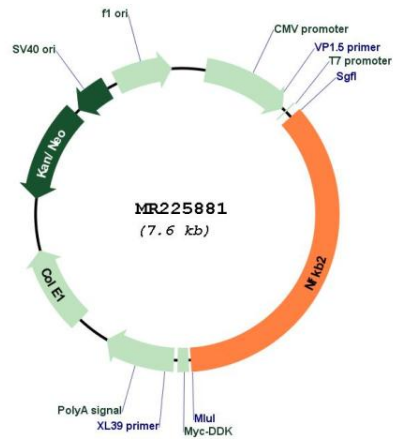
ACCN: NM_001177369

ORF Size:	2697 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_001177369.1 , NP_001170840.1
RefSeq Size:	3054 bp
RefSeq ORF:	2700 bp
Locus ID:	18034
UniProt ID:	Q9WTK5
Cytogenetics:	19 38.8 cM
MW:	96.8 kDa

Gene Summary:

NF-kappa-B is a pleiotropic transcription factor present in almost all cell types and is the endpoint of a series of signal transduction events that are initiated by a vast array of stimuli related to many biological processes such as inflammation, immunity, differentiation, cell growth, tumorigenesis and apoptosis. NF-kappa-B is a homo- or heterodimeric complex formed by the Rel-like domain-containing proteins RELA/p65, RELB, NFKB1/p105, NFKB1/p50, REL and NFKB2/p52. The dimers bind at kappa-B sites in the DNA of their target genes and the individual dimers have distinct preferences for different kappa-B sites that they can bind with distinguishable affinity and specificity. Different dimer combinations act as transcriptional activators or repressors, respectively. NF-kappa-B is controlled by various mechanisms of post-translational modification and subcellular compartmentalization as well as by interactions with other cofactors or corepressors. NF-kappa-B complexes are held in the cytoplasm in an inactive state complexed with members of the NF-kappa-B inhibitor (I-kappa-B) family. In a conventional activation pathway, I-kappa-B is phosphorylated by I-kappa-B kinases (IKKs) in response to different activators, subsequently degraded thus liberating the active NF-kappa-B complex which translocates to the nucleus. In a non-canonical activation pathway, the MAP3K14-activated CHUK/IKKA homodimer phosphorylates NFKB2/p100 associated with RelB, inducing its proteolytic processing to NFKB2/p52 and the formation of NF-kappa-B RelB-p52 complexes. The NF-kappa-B heterodimeric RelB-p52 complex is a transcriptional activator. The NF-kappa-B p52-p52 homodimer is a transcriptional repressor. NFKB2 appears to have dual functions such as cytoplasmic retention of attached NF-kappa-B proteins by p100 and generation of p52 by a cotranslational processing. The proteasome-mediated process ensures the production of both p52 and p100 and preserves their independent function. p52 binds to the kappa-B consensus sequence 5'-GGRNNYYCC-3', located in the enhancer region of genes involved in immune response and acute phase reactions. p52 and p100 are respectively the minor and major form; the processing of p100 being relatively poor. Isoform p49 is a subunit of the NF-kappa-B protein complex, which stimulates the HIV enhancer in synergy with p65 (By similarity). In concert with RELB, regulates the circadian clock by repressing the transcriptional activator activity of the CLOCK-ARNTL/BMAL1 heterodimer.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR225881