

## Product datasheet for **MG225879**

### **Nfkb2 (NM\_019408) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Nfkb2 (NM_019408) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Nfkb2
Synonyms:	lyt; NF-kappaB2; p49; p49/p100; p50B; p52
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>MG225879 representing NM\_019408  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGACAATTGCTACGATCCAGGCTGGATGGCATCCCCGAATATGATGATTTTGAATTCAGCCCCCTCCA  
 TCGTGGAGCCTAAGGATCCAGCCCTGAGACAGCTGATGGCCCTATCTGGTGATTGTGGAACAGCCCAA  
 ACAGCGAGGCTTCAGATTTTCGATATGGCTGTGAAGGCCCTCCCATGGAGGTTTGCAGGTGCCTCCAGT  
 GAGAAGGGCCGGAAGACCTATCCTACTGTCAAGATCTGTAACATGAGGGACCGCCAAGATTGAGGTGG  
 ACCTGGTGACACACAGTGACCCACCTCGTGCAGTATGCCACAGTCTGGTGGCAAGCAGTGTTCAGAGTT  
 GGGAGTGTGCGCTGTGTCTGTAGGACCCAAGGACATGACTGCTCAATTTAATAATCTGGGTGCTCCTGCAT  
 GTAACCAAGAAGAACATGATGGAGATTATGATCCAGAACTTCAGAGGCAGCGTCTCCGCTCCAAGCCTC  
 AGGGCCTTACAGAGGCTGAGCGCGGGAGCTAGAGCAGGAGGCCAAGGAGCTGAAGAAAGTCATGGATCT  
 GAGCATTGTACGGCTGCGCTTCTCAGCTTTCCTTCGAGCTAGCGATGGCTCCTTCTCCTTCCCCCTGAAG  
 CCTGTGATCTCCAGCCCATCCATGACAGCAAGTCTCCAGGGCCTCGAACCTGAAGATCTCCCGAATGG  
 ACAAGACAGCGGGTTCCTGTGCGCGTGGAGACGAAGTTTATTTGCTCTGTGATAAGGTGCAAAAAGACGA  
 CATTGAGGTTTCGGTCTATGAGGATGATGAGAATGGATGGCAAGCCTTTGGGGACTTCTCTCCACAGAC  
 GTTCATAAACAGTATGCCATTGTGTTCCGGACACCGCCATCACAAGATGAAGATCGAGAGGCCTGTAA  
 CAGTGTTCCTGCAGCTGAAACGCAAGCGTGGGGCGATGTCTCGGACTCCAAACAGTTACATATTACCC  
 TCTGGTGAAGACAAGGAGGAAGTGCAGAGGAAGCGGAGAAAGGCCTTGCCACCTTCTCCAGCCCTTC  
 GGGGCGGATCCACATGGGTGGAGTTCGGGGCTCCGCTGGGGTTATGGAGCGCTGGAGGAGGTG  
 GCAGCTCGGCTTTTTCTCCTCCTCTTGGCTACAACCCCTACCAATCCGGTGCAGCCCAATGGGCTG  
 TTATCCGGGTGGGGAGGTGGAGCGCAGATGGCGGTTCTAGACGGGACACCGATGCTGGCGAGGGGCA  
 GAGGAGCCAGGACGCCCGGAGGCTCCCCAGGGCGAACACAGGCCCTTGACACACTGCACGCGCTC  
 GCGAGTACAACGCGCGCTGTTCCGTCTGGCGCAGCGCAGCGCCGAGCGTTGCTGGACTACGGCGTCAC  
 CGCAGACGCGCTGCTCTGCTAGCGGGACAGGCCACCTGCTGATGGCACAGGACGAGAACGGAGACAG  
 CCACTGCACCTGGCCATCATCCATGGGCAGACTGGTGTCTTGGCAGATAGCCACGTCATTTATCACG  
 CTCAGTACCTCGGCTCATCAACCTCACAACACCTGCACCAGACGCTCTGCACCTGGCGGTAATCAC  
 TGGGCAGACAAGGTGGTGAAGTCTCTGCTGCAGGTGGTGCAGCCCCAGGCTGTTGCAGGACTGTTGCGCA  
 GACTCCGCCCTCACTTGGCTCTCGGGCAGGTGCTGCAGCCCCAGGCTGTTGCAGGACTGTTGCGCA  
 GCGGAGCCATGCTGTGCCCAAATATTGCACATGCCTGATTTTGAGGGACTATACCCTGTACACCTGGC  
 AGTCCATGCCCGAAGCCCTGAGTGCCTGGATCTGTTAGTTGACTGTGGAGCTGAAGTGGAGGCCCCAGAG  
 AGGCAAGGGGGCCGAAGTGCCTGATCTAGCCACAGAGATGGAGGAGTTGGGGCTGGTCAACCATCTAG  
 TCACCAAGCTCCATGCTAATGTGAATGCCCGGACCTTTGCTGGAAACACACCCCTCCACCTGGCAGCTGG  
 ACTCGGTCGCCAACTCTTACTCGCTCCTTCTAAAGGCTGGTGTGACATCCATGCAGAGAATGAGGAG  
 CCTCTGTGCCCGCTGCCCTCACCTCGACCTCTGGGAGCGACTCCGACTCTGAAGGGCTGAGAGGGATA  
 CCCAAAGAAACTCCGAGGCCATACCCCTTTGACCTCACTTGCAGTACCAAGGTGAAGACTCTGCTGCT  
 AAATGCTGCTCAGAACACCACGGAGCCACCCCTGGCCCCACCCAGCCCTGCAGGGCCAGGGCTGTCCCTG  
 GGGATGCAGCCCTGCAGAACCTGGAGCAACTGCTGGATGGTCCCGAAGCCAGGGCAGCTGGGCAGAGC  
 TGGCAGAGCGACTGGGGTTGAGAAGCCTGGTGGACACATACAGGAAGACCCCGTCTCCAGCGGAGTCT  
 CCTTCGTAGTTACAAGCTGGCTGGTGGGACTTGGTGGTCTATTGGAGGCTTGTCTGACATGGGTCTC  
 CATGAGGGAGTCAAGGCTGCTGAAAGTCTGAGACCCGCGACAAGCTGCCAGCAGAGGTGAAAGAAG  
 ACAGTGCCTATGGGAGCCAGTCACTGGAGCAGGAGGCAGAGAAGCTGTGTCCACCCCTGAGCCTCCAGG  
 AGGGCTCTGCCACGGGACCCCCAGCCTCAGGTGCAC

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - **GTTTAA**

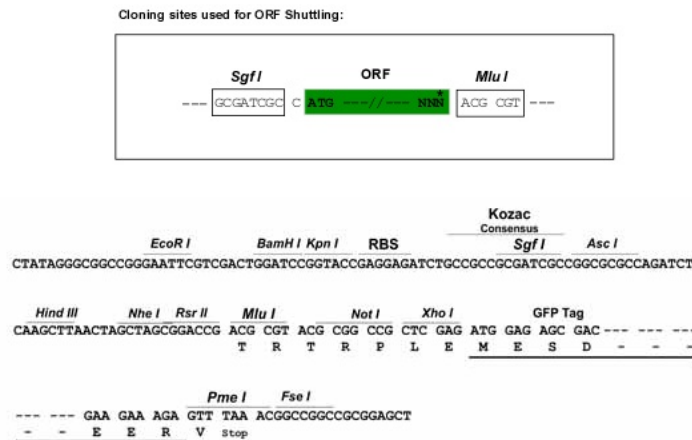
Protein Sequence: >MG225879 representing NM\_019408  
 Red=Cloning site Green=Tags(s)

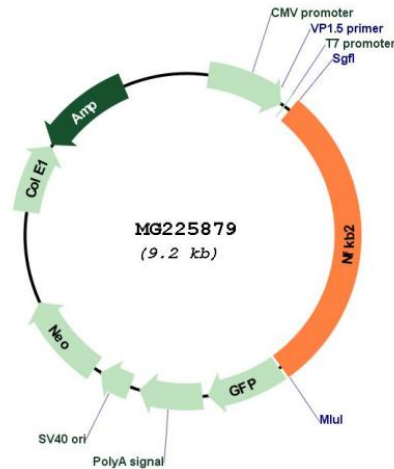
MDNCYDPGLDGIPEYDDFEFSPSIVEPKDPAPETADGPYLVIVEQPKQRGFRFRYGCCEGSPSHGGLPGASS  
 EKGRKTYPTVKICNYEGPAKIEVDLVTHSDPPRAHAHSLVGKQCESELGCAVSVGPKDMTAQFNLLGVLH  
 VTKKNMMEIMIQLQRQLRQRLRQGLTEAERRELEQEAKELKKVMDLSIVRLRFSAFLRASDGSFSLPLK  
 PVISQPIHDSKSPGASNLKISRMDKTAGSVRGGDEVYLLCDKVQKDDIEVRFYEDDENGWQAFGDFSPDT  
 VHKQYAIVFRTPPYHKMKIERPVTVFLQLKRKRGGDVSDSKQFTYYPLVEDKEEVQRKRRKALPTFSQPF  
 GGGSHMGGGSGGSAGGYGGAGGGSLGFFSSSLAYNPYQSGAAPMGCPYGGGGGAQMAGSRRRDTDAGEGA  
 EEPRTPEAPQGEPQALDTLQRAREYNARLFGLAQRSARALLDYGVTDARALLAQQRHLLMAQDENGDT  
 PLHLAIIHGQTVIEQIAHVIYHAQYLVINLTNHLHQTPHLAVITGQTRVVSFLLQVGADPTLLDRHG  
 DSALHLALRAGAAPELLQALLRSGAHAVPQILHMPDFEGLYPVHLAVHARSPECLDLLVDCGAEVEAPE  
 RQGRRALHLATEMEELGLVTHLVTKLHANVNARTFAGNTPHLAAGLGSPTLTRLLLKAGADIHAENEE  
 PLCPLPSPSTSGSDSDSEGPEDTQRNFRGHTPLDLTCSTKVKTLLLNAAQNTTEPPLAPPSPAGPGLSL  
 GDAALQNLQQLLDGPEAQGWAELAERLGLRSLVDTYRKTSPSPGSLRLSYKLAGDVLGLLEALSDMGL  
 HEGVRLLLKGPETRDKLPSTEVKEDSAYGSQSVEQAEKLCPPPEPPGGLCHGHPQPQVH

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



**Plasmid Map:**


**ACCN:** NM\_019408

**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:**

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\\_019408.1](#)

**RefSeq Size:** 3205 bp

**RefSeq ORF:** 2700 bp

**Locus ID:** 18034

**UniProt ID:** [Q9WTK5](#)

**Cytogenetics:** 19 38.8 cM

**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]