

## Product datasheet for **RG229047**

### **NFKB1 (NM\_001165412) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	NFKB1 (NM_001165412) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	NFKB1
Synonyms:	CVID12; EBP-1; KBF1; NF-kappa-B1; NF-kappaB; NF-kappabeta; NF-kB; NF-kB1; NFkappaB; NFKB-p50; NFKB-p105
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG229047 representing NM\_001165412  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCAGAAGATGATCCATATTTGGGAAGCGCTGAACAAATGTTTCATTTGGATCCTTCTTTGACTCATA  
 CAATATTTAATCCAGAAGTATTTCAACCACAGATGGCACTGCCAACAGCAGATGGCCATACCTTCAAAT  
 ATTAGAGCAACCTAAACAGAGAGGATTTTCGTTCCGTTATGTATGTGAAGGCCCATCCCATGGTGGACTA  
 CCTGGTGCCTCTAGTGAAAAGAACAAGAAGTCTTACCCTCAGGTCAAATCTGCAACTATGTGGGACCAG  
 CAAAGGTTATTGTTTCAGTTGGTCACAAATGGAAAAAATATCCACCTGCATGCCACAGCCTGGTGGGAAA  
 ACACTGTGAGGATGGGATCTGCACTGTAACCTGCTGGACCAAGGACATGGTGGTCCGGCTTCGCAACCTG  
 GGTATACTTCATGTGACAAAGAAAAAGTATTTGAAACTGGAAGCAGCAATGACAGAGGCGTGTATAA  
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 GCAGCTGGGAGATCGGGAAAAAGAGCTAATCCGCCAAGCAGCTCTGCAGCAGACCAAGGAGATGGACCTC  
 AGCGTGGTGCAGCTCATGTTACAGCTTTCTTCCGGATAGCACTGGCAGCTTCAACAAGGCGCTGGAAC  
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 CAGGACAGCTGGATGTGTGACTGGAGGGGAGGAAATTTATCTTCTTTGTGACAAAGTTGAGAAAGATGAC  
 ATCCAGATTCGATTTTATGAAGAGGAAGAAAAATGGTGGAGTCTGGGAAGGATTTGGAGATTTTCCCCCA  
 CAGATGTTTCATAGACAATTTGCCATTGTCTTCAAACCTCAAAGTATAAAGATATTAATATTACAAAACC  
 AGCCTCTGTGTTGTCCAGCTTCGGAGGAAATCTGACTTGAAACTAGTGAACCAAAACCTTTCTCTAC  
 TATCTGAAATCAAAGATAAAGAAGAAGTGCAGAGGAAACGTGAGAACTCATGCCAATTTTTCGGATA  
 GTTTCGGCGGTGGTAGTGGTGGCGGAGCTGGAGCGGAGGCATGTTGGTAGTGGCGGTGGAGGAGGGGG  
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 GCAAGATCAGGAGCCAGCGAGGCCACCGTTGGGAATGGTGAAGTCACTTAACGTATGCAACAGGAACA  
 AAAGAAGAGAGTGTGGAGTTCAGGATAACCTCTTCTAGAGAAGGCTATGCAGCTTGCAGGAGGCATG  
 CCAATGCCCTTTTCGACTACGCGGTGACAGGAGACGTGAAGATGCTGCTGGCCGTCACGCGCCATCTCAC  
 TGCTGTGCAGGATGAGAATGGGACAGTGTCTTACACTTAGCAATCATCCACCTTATTCTCAACTGTG  
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 AGACGCCCTTGCACTTGCCAGTATCACTAAGCAGGAAGATGTGGTGGAGGATTTGCTGAGGGCTGGGGC  
 CGACCTGAGCCTTCTGGACCGCTTGGGTAACCTGTTTTGCACCTAGCTGCCAAAAGAGGACATGATAAA  
 GTTCTCAGTATCTTACTCAAGCACAAAAAGGCAGCACTACTTCTTGACCACCCCAACGGGGACGGTCTGA  
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 CGTCAATGCTCAGGAGCAGAAGTCCGGGCGCACAGCACTGCACCTGGCTGTGGAGCAGCAACATCTCA  
 TTGGCAGGCTGCCTGCTCCTGGAGGGTATGCCATGTGGACAGTACTACCTACGATGGAACCACACCCC  
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 GGTCTGGGGATACTTAATAATGCCTTCCGGCTGAGTCTGCTCTTCCAAAACTTATGGACAATATG  
 AGGTCTCTGGGGTACAGTCAGAGAGCTGGTGGAGGCCCTGAGACAAATGGGCTACACCGAAGCAATTGA  
 AGTGATCCAGGCAGCCTCCAGCCAGTGAAGACCACCTCTCAGGCCACTCGTGCCTCTCTCGCCTGCC  
 TCCACAAGGCAGCAAATAGACGAGCTCCGAGACAGTGCAGTGTCTGCGACAGCGCGTGGAGACATCCT  
 TCCGAAAACCTCAGCTTTACCGAGTCTTGACCAGTGGTGCCTCACTGCTAACTCTCAACAAAATGCCCA  
 TGATTATGGGCAGGAAGGACCTCTAGAAGGCAAAT

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG229047 representing NM\_001165412  
 Red=Cloning site Green=Tags(s)

MAEDDPYLGRPEQMFHLDPSLTHITFNPEVFQPQMALPTADGPYLQILEQPKQRGFRFRYVCEGPSHGGL  
 PGASSEKNKKSYPQVKICINYVGPAAKIVIVQLVTNGKNIHLHAHSLVGKHCEDGICTVTAGPKDMVVGAFANL  
 GILHVTKKKVFETLEARMTEACIRGYNPGLLVHPDLAYLQAEGGDRQLGDREKELIRQAALQQTKEMDL  
 SVVRLMFTAFLPDSTGFSFTRRLEPVVSDAIYDSKAPNASNLKIVRMDRTAGCVTGGEEIYLLCDKVQKDD  
 IQIRFYEEEEENGWEGFGDFSPDTHRQFAIVFKTPKYKDINITKPASVFVQLRRKSDLETSEPKPFLY  
 YPEIKDKKEEVQRKRQKLMPNFSDSFGGSGAGAGGGMGFGSGGGGGTSTGPGYSFPHYGFPTYGGITF  
 HPGTTKSNAGMKHGTMDTESKDPGCDKSDDKNTVNLFGKVIETTEQDQEPSEATVGNGEVTLTYATGT  
 KEESAGVQDNLFLEKAMQLAKRHANALFDYAVTGDVKMLLAVQRHLTAVQDENGDSVLHLAIIHLHSQLV  
 RDLLEVTSGLISDDIINMRNDLYQTPHLAVITKQEDVVEDLLRAGADLSLLDRLGNSVLHLAAKEGHDK  
 VLSILLKHKKAALLLDHPNGDGLNAIHLAMMSNSLPCLLLLVAAGADVNAQEQKSGRTALHLAVEHDNIS  
 LAGCLLLEGDHVDSTTYDGTTPHLIAAGRGSTRLAALLKAAGADPLVENFEPLYDLDDSWENAGEDEGV  
 VPGTTPDMATSWQVFDILNGKPYEPEFTSDDLAAQGMKQLAEDVKLQLYKLEIPDPDKNWATLAQKL  
 GLGILNNAFRLSPAPSKTLMNDYEVSGGTVRELVEALRQMGYTEAIEVIQAASSPVKTTSAHSLPLSPA  
 STRQQIDELRDSVCDSGVETSFRKLSFTESLTSASLLTLNKMPhDYGQEGPLEGKI

TRTRPLE - GFP Tag - V

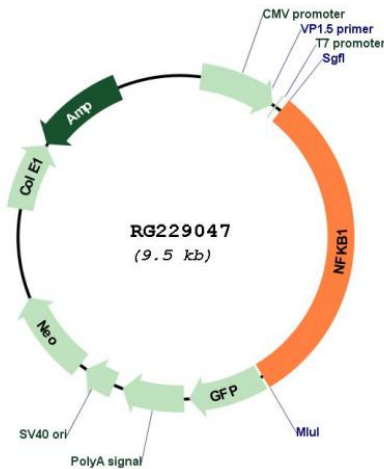
**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



## Plasmid Map:



ACCN: NM\_001165412

ORF Size: 2904 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](mailto: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](#)

**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\\_001165412.1](#), [NP\\_001158884.1](#)

RefSeq Size:	4090 bp
RefSeq ORF:	2907 bp
Locus ID:	4790
UniProt ID:	<a href="#">P19838</a>
Cytogenetics:	4q24
Protein Families:	Druggable Genome, Transcription Factors
Protein Pathways:	Acute myeloid leukemia, Adipocytokine signaling pathway, Apoptosis, B cell receptor signaling pathway, Chemokine signaling pathway, Chronic myeloid leukemia, Cytosolic DNA-sensing pathway, Epithelial cell signaling in Helicobacter pylori infection, MAPK signaling pathway, Metabolic pathways, Neurotrophin signaling pathway, NOD-like receptor signaling pathway, Pancreatic cancer, Pathways in cancer, Prostate cancer, RIG-I-like receptor signaling pathway, Small cell lung cancer, T cell receptor signaling pathway, Toll-like receptor signaling pathway
Gene Summary:	<p>This gene encodes a 105 kD protein which can undergo cotranslational processing by the 26S proteasome to produce a 50 kD protein. The 105 kD protein is a Rel protein-specific transcription inhibitor and the 50 kD protein is a DNA binding subunit of the NF-kappa-B (NFKB) protein complex. NFKB is a transcription regulator that is activated by various intra- and extra-cellular stimuli such as cytokines, oxidant-free radicals, ultraviolet irradiation, and bacterial or viral products. Activated NFKB translocates into the nucleus and stimulates the expression of genes involved in a wide variety of biological functions. Inappropriate activation of NFKB has been associated with a number of inflammatory diseases while persistent inhibition of NFKB leads to inappropriate immune cell development or delayed cell growth. NFKB is a critical regulator of the immediate-early response to viral infection. Alternative splicing results in multiple transcript variants encoding different isoforms, at least one of which is proteolytically processed. [provided by RefSeq, Aug 2020]</p>