

Product datasheet for **RC208384**

NFKB1 (NM_003998) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NFKB1 (NM_003998) Human Tagged ORF Clone
Tag:	Myc-DDK
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-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC208384 representing NM_003998
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCAGAAGATGATCCATATTTGGGAAGCGCTGAACAAATGTTTCATTTGGATCCTTCTTTGACTCATA
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ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
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Protein Sequence: >RC208384 representing NM_003998
 Red=Cloning site Green=Tags(s)

MAEDDPYLGRPEQMFHLDPSLTHITFNPEVFPQPMALPTADGPYLQILEQPKQRGFRFRVYCEGPSHGGL
 PGASSEKNKKSYPQVKICNYVGPAAKIVIVQLVTNGKNIHLHAHSLVGKHCEDGICTVTAGPKDMVVGFANL
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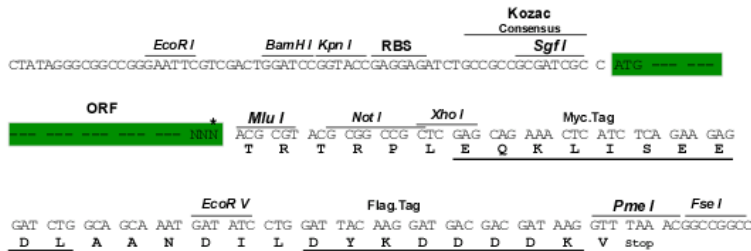
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg2730_b07.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_003998

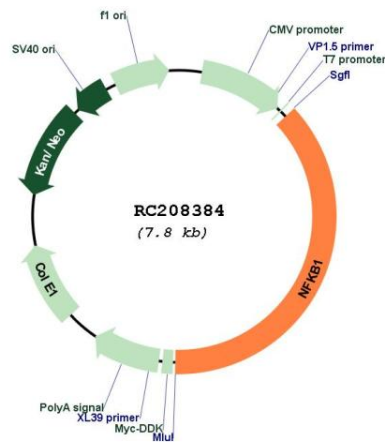
ORF Size: 2907 bp

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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_003998.2 , NP_003989.2
RefSeq Size:	4104 bp
RefSeq ORF:	2910 bp
Locus ID:	4790
UniProt ID:	P19838
Cytogenetics:	4q24
Domains:	RHD, DEATH, ANK, IPT
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
MW:	105.2 kDa

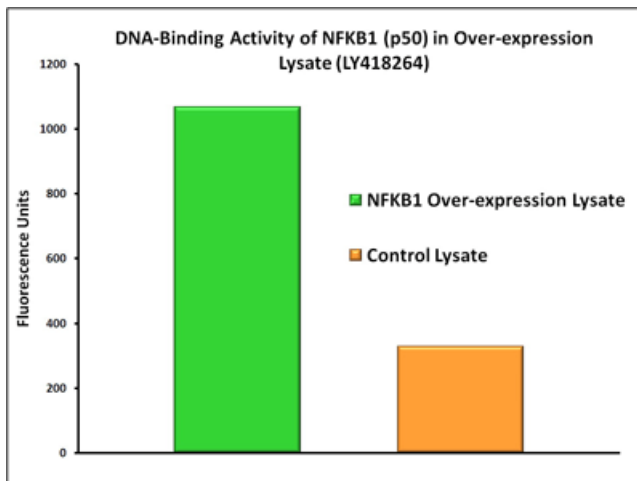
Gene Summary:

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]

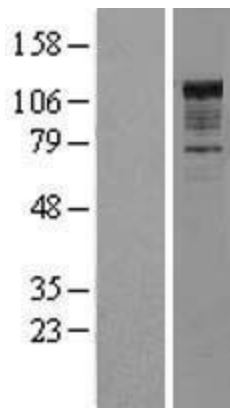
Product images:



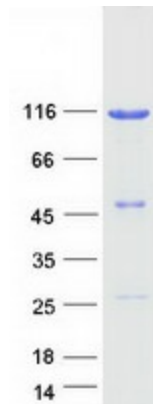
Circular map for RC208384



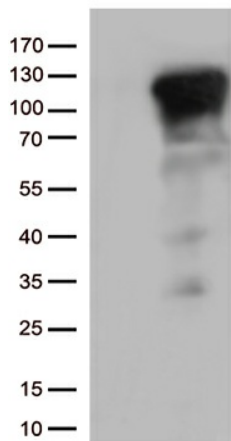
DNA-binding activity of NFKB1 was measured in OriGene over-expression lysate [LY418264] and a control lysate. Three microliters of each lysate was tested with a transcription factor binding assay utilizing NFKB1-specific DNA sequences. The high level of activity observed in the over-expression lysate compared to the control lysate demonstrates that the expressed NFKB1 is biologically active in the lysate. Overexpression cell lysates are prepared from HEK293T cells transfected with RC208384 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Western blot validation of overexpression lysate (Cat# [LY418264]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC208384 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified NFKB1 protein (Cat# [TP308384]). The protein was produced from HEK293T cells transfected with NFKB1 cDNA clone (Cat# RC208384) using MegaTran 2.0 (Cat# [TT210002]).



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY NFKB1 (Cat# RC208384, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-NFKB1 (Cat# [TA813232])(1:500).