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Product datasheet for MC222894

Nfkb1 (NM_008689) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Nfkb1 (NM_008689) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Nfkb1
Synonyms:	NF-kappaB; NF-kappaB1; NF-KB1; p50; p50/p105; p105
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

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Fully Sequenced ORF:

>MC222894 representing NM_008689
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCAGACGATGATCCCTACGGAACTGGGCAAATGTTTCATTTGAACACTGCTTTGACTCACTCAATAT
TTAATGCAGAATTATATTCACCAGAAATACCACTGTCAACAGATGGCCCATACCTTCAAATATTAGAGCA
ACCAAAACAGAGGGGATTTCGATTCCGCTATGTGTGTGAAGGCCCATCACACGGAGGGCTTCCGGGAGCC
TCTAGTGAGAAGAACAAGAAATCCTACCCACAGGTCAAAATTTGCAACTATGTGGGGCCTGCAAAGGTTA
TCGTTCAGTTGGTCACAAATGGAAAAAACATCCACCTGCACGCCCACAGCCTGGTGGGCAAGCACTGTGA
GGACGGGGTATGCACCGTAACAGCAGGACCCAAGGACATGGTGGTTGGCTTTGCAAACCTGGGAATACTT
CATGTGACTAAGAAAAAGGTATTTGAAACACTGGAAGCACGGATGACAGAGGCGTGTATTAGGGGCTATA
ATCCTGGACTTCTGGTGCATTCTGACCTTGCCTATCTACAAGCAGAAGGCGGAGGAGACCGGCAACTCAC
AGACAGAGAGAAGGAGATCATCCGCCAGGCAGCCGTGCAGCAGACCAAGGAGATGGACCTGAGCGTGGTG
CGCCTCATGTTCACAGCCTTCCTCCCTGACAGCACTGGCAGCTTCACTCGGAGACTGGAGCCTGTGGTGT
CAGACGCCATCTATGATAGCAAAGCCCCGAATGCATCCAACCTGAAAATCGTGAGAATGGACAGAACAGC
AGGATGTGTGACGGGAGGGGAGGAGATTTACCTTCTCTGTGACAAGGTTCAGAAAGATGACATCCAGATT
CGGTTTTATGAAGAGGAAGAAAATGGCGGAGTTTGGGAAGGATTTGGGGACTTTTCCCCCACAGATGTTC
ATAGACAGTTTGCCATTGTCTTCAAAACGCCAAAGTATAAGGATGTCAACATTACAAAGCCAGCTTCCGT
GTTTGTTCAGCTTCGGAGGAAATCAGACCTGGAAACTAGTGAACCGAAACCCTTTCTCTACTACCCTGAA
ATCAAAGACAAAGAGGAAGTGCAAAGGAAACGCCAGAAGCTTATGCCGAACTTCTCGGACAGCTTCGGTG
GCGGCAGTGGAGCGGGAGCCGGTGGTGGAGGCATGTTCGGTAGTGGCGGTGGCGGAGGGAGTACCGGAAG
CCCTGGCCCAGGGTATGGCTACTCGAACTACGGATTTCCTCCCTACGGTGGGATTACATTCCATCCCGGA
GTCACGAAATCCAACGCAGGGGTCACCCATGGCACCATAAACACCAAATTTAAAAATGGCCCTAAAGATT
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GCCCATGGCCTGCACCAAGACGGAACCCATCGCCTTGGCATCCACCATGGAAGACAAGGAGCAGGACATG
GGATTTCAGGATAACCTCTTTCTTGAGAAGGCTCTGCAGCTCGCCAGGCGACACGCCAACGCCCTTTTCG
ACTACGCAGTGACGGGGGATGTGAAGATGTTGCTGGCCGTGCAACGCCATCTCACCGCCGTGCAGGATGA
GAATGGGGACAGTGTCTTACACTTAGCCATCATCCACCTCCACGCTCAGCTTGTGAGGGATCTGCTGGAA
GTCACATCTGGTTTGATCTCTGATGACATCATCAACATGAGAAATGACCTGTATCAGACACCTCTGCACT
TGGCCGTGATCACCAAGCAGGAAGATGTAGTAGAGGATTTGCTGAGGGTTGGGGCTGACCTGAGCCTTCT
GGACCGCTGGGGCAACTCTGTCCTGCACCTAGCTGCCAAAGAAGGACACGACAGAATCCTCAGCATCCTG
CTCAAGAGCAGAAAAGCAGCGCCCCTTATCGACCACCCCAATGGGGAAGGTCTAAATGCCATCCACATAG
CTGTGATGAGCAATAGCCTGCCATGTCTGCTGCTGCTGGTGGCTGCCGGGGCAGAAGTCAATGCTCAGGA
GCAGAAGTCTGGGCGCACAGCGCTGCACCTGGCCGTGGAGTACGACAACATCTCCTTGGCTGGCTGCCTG
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GAAGAGGGTCCACCAGACTGGCAGCTCTTCTCAAAGCAGCAGGAGCAGACCCCCTGGTGGAGAACTTTGA
GCCTCTCTATGACCTGGACGACTCTTGGGAGAAGGCTGGAGAAGATGAGGGAGTGGTGCCAGGTACCACA
CCCCTGGACATGGCTGCCAACTGGCAGGTATTTGACATACTAAATGGGAAACCGTATGAGCCTGTGTTCA
CATCTGATGATATACTACCACAAGGGGACATGAAGCAGCTGACAGAAGACACGAGGCTACAACTCTGCAA
ACTGCTGGAAATTCCTGATCCAGACAAAAACTGGGCCACTCTGGCACAGAAGTTGGGTCTGGGGATACTG
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CCATCAAAGAGCTGATGGAGGCCCTGCAACAGATGGGCTACACAGAGGCCATTGAAGTGATCCAGGCAGC
CTTCCGCACCCCGGCAACCACAGCCTCCAGCCCCGTGACCACTGCTCAGGTCCACTGTCTGCCTCTCTCG
TCTTCCTCCACGAGGCAGCACATAGATGAACTCCGGGATAGTGACAGCGTCTGTGACAGTGGTGTGGAGA
CATCCTTCCGCAAACTCAGCTTTACAGAGTCTCTTACTGGAGACAGCCCACTGCTATCTCTGAACAAAAT
GCCCCACGGTTATGGGCAGGAAGGACCTATTGAAGGCAAAATTTAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites:	SgfI-MluI
ACCN:	NM_008689
Insert Size:	2916 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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_008689.2, NP_032715.2
RefSeq Size:	4128 bp
RefSeq ORF:	2916 bp
Locus ID:	18033
UniProt ID:	P25799
Cytogenetics:	3 62.82 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 and the heterodimeric p65-p50 complex appears to be most abundant one. 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. NF-kappa-B heterodimeric p65-p50 and RelB-p50 complexes are transcriptional activators. The NF-kappa-B p50-p50 homodimer is a transcriptional repressor, but can act as a transcriptional activator when associated with BCL3. NFKB1 appears to have dual functions such as cytoplasmic retention of attached NF-kappa-B proteins by p105 and generation of p50 by a cotranslational processing. The proteasome-mediated process ensures the production of both p50 and p105 and preserves their independent function, although processing of NFKB1/p105 also appears to occur post-translationally. p50 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. Plays a role in the regulation of apoptosis. Isoform 5, isoform 6 and isoform 7 act as inhibitors of transactivation of p50 NF-kappa-B subunit, probably by sequestering it in the cytoplasm. Isoform 3 (p98) (but not p84 or p105) acts as a transactivator of NF-kappa-B-regulated gene expression. In a complex with MAP3K8, NFKB1/p105 represses MAP3K8-induced MAPK signaling; active MAP3K8 is released by proteasome-dependent degradation of NFKB1/p105.[UniProtKB/Swiss-Prot Function]