

## Product datasheet for **MR210080**

### **Ikbke (BC037446) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Ikbke (BC037446) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Ikbke
Synonyms:	Ikki, IKK-i
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR210080 representing BC037446  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGCAGAGTACCACTAACTACCTGTGGCATACTGATGACCTGCTAGGGCAGGGGGCCACTGCCAGTGTGT  
 ACAAGGCCGAAACAAGAAATCCGGGGAGGTGGTTGCTGTAAAGGTCTTCAACTCAGCCAGCTATCGGCG  
 ACCTCCTGAGTTTCAGGGAGGCAGCCGGCAGAAGGTGCTAATCATGGAGTACTGCTCCAGTGGGAGCCTG  
 CTGAGCGTGTGGAAGACCCTGAGAACACGTTCCGGCTTTCTGAAGAGGAGTTTCTAGTGGTGTGCGCT  
 GTGTGGTGGTGGCATGAACCACCTGCGGGAGAATGGCATTGTCCATCGGGACATCAAACCTGGGAACAT  
 CATGCGCCTGGTGGCGAGGAGGGCAGAGCATCTATAAGCTGTCTGACTTCGGGGCTGCCCGAAGCTG  
 GACGATGATGAGAAGTTTGTCTGTCTATGGTACAGAGGAATACCTGCACCCTGACATGTATGAGCGTG  
 CAGTGTGCGCAAACCCAGCAAAGGCATTTGGTGTGACTGTGGATCTCTGGAGTATTGGGGTGACCTT  
 GTACCACGCAGCCACAGGCAGTCTGCCCTTCATCCCCTTCGGTGGGCCCCGGCGCAACAAAGAGATCATG  
 TACAGAATCACCCAGAGAAGCCAGCCGGGGCCATTTACGGGACTCAGAAGCAGGAAAATGGTCCCTTGG  
 AGTGGAGCTACAGCCTCCCCATCACCTGTAGACTGTCCATGGGGCTGCAGAACCGCTGGTGGCCATCCT  
 GGCCAACATCCTGGAGGTGGAAGAGGATAAGTGTGGGGCTTTGATCAGTTCTTCGCGGAGACCAGTGAC  
 ATTCTGCAGCGAACGGTCATCCACGTCTTTTCCCTACCCAGGCCGTTTTGCATCATGTCTACATCCACG  
 CCCACAACACGATTGCCATCTTTTTGGAGGCTGTATATGAGCAGACCAACGTGACCCCCAAACACCAGGA  
 GTACCTCTTCGAGGGTCAACCTTGTGTCTTGGAGCAAGCCTCTCAGCCCAGCACATCGCCACACAGCT  
 GCCAGCAGCCCTAACTCTGTTTCAGCATGTCCAGCGACACACCTAAGGGGCTGGCCTCAGGGACCCTG  
 CTCTGGATGTCCAAAGTTCGTCCCTAAGGTTGACCTACAGGCGATTACAGCACAGCTAAGGGGGTGTCT  
 GGGCGCTGGCTACCAGGCCCTGTGGCTGGCGCGGGTCTGCTGGATGGACAGGCGTTGATGCTTCGGGGG  
 TTACATTGGGTCTGGAGGTGCTTCAGGACACGTGCCAGCAGACTGGAGGTACACCGGACAGCCCTCC  
 TCTACCTCGGCAGCAGCCTGGGCACTGAAAGGTTGAGCAGTGGATCGGGGATGCCTGACGTCCAGGAACG  
 AAAGGAGGCCACAGAGCTAAGAACCAGGCTGCAGACTCTCTCAGAGATCCTGTCTAAATGTTCCACAAT  
 GTCACAGAAACCCAAAGGAGCCTGAGCTGTCTGGGTGAAGAGCTTTTAAAGAACCAGGACCAGATTCATG  
 AGGATAACAAAAGTATCCAGAAGATTGAGTGTGTTGGACAAGATGCACTTCATCTACAAACAGTTCAA  
 GAAATCCAGGATGAGGCCAGGGCTCAGCTACAATGAGGAGCAGATCCACAAGCTGGATAAGGTAATTTT  
 AGTCATCTAGCCAAGAGGCTGCTGCAGGTGTTCCAGGAGGAGTGTGTGCAGACGTATCAGGTGTCGCTGG  
 TCACACACGGCAAGCGGATGAGGCAGGTGCAGAGGGCCAGAACCACCTGCATCTCATTGGCCACTCTGT  
 GGCCACCTGTAACCTCGGAAGCCCGGGAGCCAGGAGAGTCTGAACAAGATCTTTGATCAGCTCCTTCTG  
 GACAGAGCTTCCGAACAGGGAGCTGAGGTGTCACCGCAACCTATGGCTCCTCATCCCGCCCTGATCCGA  
 AGGACCTGGTCTTCCACATGCAGGAGCTTTGTAATGATATGAAGCTATTGGCCTTTGATCTCCAGGACAA  
 CAACCGACTCATCGAACGGTTACATAGAGTTCATCGGCACCAGATGTC

**ACGCGT**ACGCGGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >MR210080 representing BC037446  
 Red=Cloning site Green=Tags(s)

MQSTTNYLWHTDDLQGGATASVYKARNKKSGEVVAVKVFNSASYRRPPEVQGGSRQKVLIMEYCSSGSL  
 LSVLEDPENTFGLSEEEFLVLRVAVGMNHLRENGIVHRDIKPGNIMRLVGEEQSIYKLSDFGAARKL  
 DDDEKFVSVYGTTEEYLHPDMYERAVLRKPQQAQAFGVTVDLWSIGVTLYHAATGSLPFIPIFGGPRRKEIM  
 YRITTEKPAAGISGTQKQENGPLEWSYSLPITCRLSMGLQNLVPILANILEVEEDKCWGFQDQFFAETSD  
 ILQRTVIHVFSLPQAVLHHVYIHAHNTIAIFLEAVYEQTNVTPKHQEYLFEGHPCVLEPSLSAQHIAHTA  
 ASSPLTLFSMSSDTPKGLAFRDPALDVPKFVVKVDLQADYSTAKGVLGAGYQALWLARVLLDQALMLRG  
 LHWVLEVLQDTCQQTLEVTRTALLYLGSLSLGTERTSSGSGMPDVQERKEATELRRLQTLSEILSKCSHN  
 VTETQRSLSCLGEELLKNRDQIHEDNKSQIKIQCCLDKMHFIYKQFKSRMRPGLSYNEEQIHKLDKYNF  
 SHLAKRLLQVFQEECVQTYQVSLVTHGKMRQVQRAQNHLHLIGHSVATCNSEARGAQESLNKIFDQLLL  
 DRASEQGAEVSPQPMAPHPGDPKDLVFHMQELCNDMKLLAFDLQDNNRLIERLHRVPSAPDV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



**ACCN:** BC037446

**ORF Size:** 2079 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:** [BC037446](#), [AAH37446](#)

**RefSeq Size:** 2931 bp

**RefSeq ORF:** 2081 bp

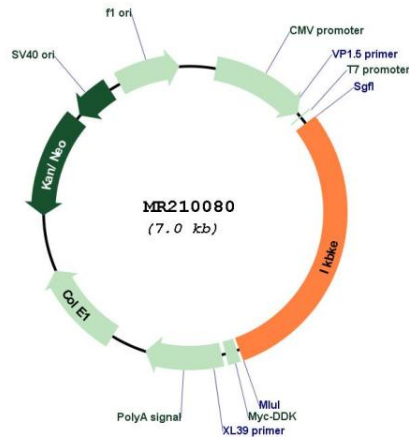
**Locus ID:** 56489

**Cytogenetics:** 1 E4

**MW:** 107.5 kDa

**Gene Summary:** Serine/threonine kinase that plays an essential role in regulating inflammatory responses to viral infection, through the activation of the type I IFN, NF-kappa-B and STAT signaling. Also involved in TNFA and inflammatory cytokines, like Interleukin-1, signaling. Following activation of viral RNA sensors, such as RIG-I-like receptors, associates with DDX3X and phosphorylates interferon regulatory factors (IRFs), IRF3 and IRF7, as well as DDX3X. This activity allows subsequent homodimerization and nuclear translocation of the IRF3 leading to transcriptional activation of pro-inflammatory and antiviral genes including IFNB. In order to establish such an antiviral state, IKBKE forms several different complexes whose composition depends on the type of cell and cellular stimuli. Thus, several scaffolding molecules including IPS1/MAVS, TANK, AZI2/NAP1 or TBKBP1/SINTBAD can be recruited to the IKBKE-containing-complexes. Activated by polyubiquitination in response to TNFA and interleukin-1, regulates the NF-kappa-B signaling pathway through, at least, the phosphorylation of CYLD. Phosphorylates inhibitors of NF-kappa-B thus leading to the dissociation of the inhibitor/NF-kappa-B complex and ultimately the degradation of the inhibitor. In addition, is also required for the induction of a subset of ISGs which displays antiviral activity, may be through the phosphorylation of STAT1 at 'Ser-708'. Phosphorylation of STAT1 at 'Ser-708' seems also to promote the assembly and DNA binding of ISGF3 (STAT1:STAT2:IRF9) complexes compared to GAF (STAT1:STAT1) complexes, in this way regulating the balance between type I and type II IFN responses. Protects cells against DNA damage-induced cell death. Also plays an important role in energy balance regulation by sustaining a state of chronic, low-grade inflammation in obesity, which leads to a negative impact on insulin sensitivity. Phosphorylates AKT1. [UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR210080