

## Product datasheet for **MC206656**

### Irak4 (BC051676) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Irak4 (BC051676) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Irak4
Synonyms:	NY-REN-64, IRAK-4
Mammalian Cell Selection:	Neomycin
Vector:	PCMV6-Kan/Neo (PCMV6KN)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**Fully Sequenced ORF:** >BC051676  
 GTCCACAGGGGGATATGATGCCCCGTGACCCGACGATCCCGATCGCAGGCAGTCTGAAGTCGCCTGG  
 TGGTCCTGCGTCTCCACCCCGAGTCCTCGCCGGACCGTGGCGGGACGCCGATCGCCTTGTCCAGGAAG  
 CGAGGGACGTCCGAGAGGAAGTAGAAGATGAACAAGCCGTTGACACCATCGACATACATACGCAACCTTA  
 ATGTGGGGATCCTTAGGAAGCTGTCGGATTTTATTGATCCTCAAGAAGGGTGAAGAAATTAGCAGTAGC  
 TATCAAAAAGCCGTCGCGGACGACAGATAACAATCAGTTCATATAAGGAGATTCGAAGCCTTACTTCAG  
 ACCGGGAAGAGCCACCTGTGAAGTGTGTTGACTGGGGCACCACGAAGTGCACAGTTGGCGACCTTG  
 TGGATCTACTGGTCCAGATTGAGCTGTTTGCCCCGCCACTCTCCTGCTGCCGGATGCCGTTCCCAAAAC  
 CGTCAAAAAGCCTGCCTCCTAGAGAAGCGCAACAGTGGCACAAACACACGGGCCTTGTGAGAAAAGGAC  
 AGGACATCCGTAATGCCTATGCCAAGCTAGAACACAGCTGCGAGCCACCGGACTCCTCAAGCCAGACA  
 ACAGAAGTGTAGAGTCCAGCGACACTCGGTTCCACAGCTTCTCGTTCCATGAAGTGAAGAGCATCACAAA  
 CAACTTCGACGAGCAACCCGCTGTCGCGGTGGCAACCGGATGGGAGAGGGGGGATTTGGAGTGGTGTAC  
 AAGGGCTGTGTGAACAACACCATCGTGGCGGTGAAGAAGCTCGGAGCGATGGTTGAAATCAGTACTGAAG  
 AACTAAAGCAACAGTTTGTCAAGAAATTAAGTAAATGGCAACGTGTGAGCAGGAGAACCTGGTGGAGCT  
 GCTCGGCTTCTCCAGCGACAGCGACAACCTGTGCTTAGTGTATGCTTACATGCCAACGGGTCTTGTCTG  
 GACAGACTGTCCCTGCCTGGATGGTACACCACCGCTTTCCTGGCACACAAGGTGCAAGGTTGCTCAGGGGA  
 CAGCAATGGCATCAGGTTTCTGCATGAAAATCATCACATTCATAGAGATATAAAAAGTCAAAATATCTT  
 ACTAGACAGAGACTTTACTGCCAAAATATCTGACTTTGGGCTTGCACGGGCTTCGGCAAGGCTAGCGCAG  
 ACGGTCATGACCAGCCGAATCGTGGGCACAACGGCTTACATGGCACCCGAAGCTTTGCGGGGAGAAAATA  
 CACCAAACTGACATCTACAGCTTCGCGGTGGTTCTGTTGGAGCTGATAACCGGGCTGGCGGCTGTGGA  
 TGAAAACCGTGAACCTCAACTACTGCTGGATATTAAGAAGAGATTGAAGATGAAGAGAAGACGATTGAA  
 GATTACACGGATGAGAAGATGAGCGATGCGGACCCTGCTTCGGTGAAGCAATGTACTCTGCTGCTAGCC  
 AGTGTCTGCATGAGAAGAAAAACAGACGGCCAGACATTGCAAAGGTTCAACAGCTGTACAAGAGATGTC  
 TGCTTAAACTAATAAACTTTTTTTTTTTTTTTTCTTTTACTTCTCGAGAACCTGGAGACCGGAAAAGCACT  
 TTGACACTGAGCTGCGTCACCTACCTGTTGTTTGCATTTGTTTTGTTTTCTTAAATGCGCTTTATGTTT  
 AACATGGTAGCATAGTGAATGTACCAATGTACTGGTTAGTTAGTTAATAGACGAGTTGGCACCGCAGCC  
 AAAGTGATAGTTGCATGGTAGCACTTGGCCCCGCCACCTAGTATGGGGCTCATGTTCCACAGCAACATC  
 ACCAACTATAGTGAAGTAAAGATTGAGAAAACAGCACTGTGCTATACAGAGACAATAGGATTATTTGG  
 GCGGGGGGAGTGAGACACGGTGTCTCTGTGTAGCCCTGGATGTCCTGGAAGTGTCTGTAGACCAGGC  
 TGGCCTTGAAGTCAAGTCTGCCTGTCTGCTACTGCGTGTGGGATTAAGGTGTGTGCCACTCCT  
 GTAAGCTTTGGACCAGCTCTTAGCTGCCTTAAAGCCTTAGTGTGCTTTTGGTTTTGATAGGAACTTC  
 ATGCTCCTGTAATAGCTCCTACCTAGGTTCCGTAAAGGAACCTCTCCTCACTGCTCCTGTAACCTAA  
 CTAAACTCATTGGTTCAACAATGTAGACATGAGTGAATCTATTCTTCTGTCTGTTATTGTGGTCTATT  
 TTGAATGAATAGATGTTTGTGTCATCCCTCCCCCCCCACCCCAATTCATACATGGTACTATACGTTG  
 GGGTATAACAGAACCAATAGTGAGTTTGGAGGGTGTGTGTGTGTGCTTGTATTGTCTCTGCAATGGGC  
 AATAAAACATGTAAGTGGGCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

**Restriction Sites:** EcoRI-NotI

**ACCN:** BC051676

**Insert Size:** 1380 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:** [BC051676](#), [AAH51676](#)

**RefSeq Size:** 2431 bp

**RefSeq ORF:** 1380 bp

**Locus ID:** 266632

**Cytogenetics:** 15 E3

**Gene Summary:** Serine/threonine-protein kinase that plays a critical role in initiating innate immune response against foreign pathogens. Involved in Toll-like receptor (TLR) and IL-1R signaling pathways. Is rapidly recruited by MYD88 to the receptor-signaling complex upon TLR activation to form the Myddosome together with IRAK2. Phosphorylates initially IRAK1, thus stimulating the kinase activity and intensive autophosphorylation of IRAK1. Phosphorylates E3 ubiquitin ligases Pellino proteins (PELI1, PELI2 and PELI3) to promote pellino-mediated polyubiquitination of IRAK1. Then, the ubiquitin-binding domain of IKBKG/NEMO binds to polyubiquitinated IRAK1 bringing together the IRAK1-MAP3K7/TAK1-TRAF6 complex and the NEMO-IKKA-IKKB complex. In turn, MAP3K7/TAK1 activates IKKs (CHUK/IKKA and IKBKB/IKKB) leading to NF-kappa-B nuclear translocation and activation. Alternatively, phosphorylates TIRAP to promote its ubiquitination and subsequent degradation. Phosphorylates NCF1 and regulates NADPH oxidase activation after LPS stimulation suggesting a similar mechanism during microbial infections (By similarity).[UniProtKB/Swiss-Prot Function]