

Product datasheet for **MC200007**

Irak1 (BC004778) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Irak1 (BC004778) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Irak1
Synonyms:	IRAK, mPLK
Mammalian Cell Selection:	Neomycin
Vector:	PCMV6-Kan/Neo (PCMV6KN)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >BC004778
 GCGGAGGGCAAGATGGCGGCGGGTTCGAGCGCCGCTCTCCGCCCGCCGGGTGTGCGACGAGGCCGGCC
 TGAAGGGGAAGTGAGTCAGTGTCCGCGGACCCGGCCCGCTAAGGCCCGCGCCCGGAGGCCCGGAGAGG
 CCTCGGCCCGGGGGCGGCGGCGGCCATGGCCGGGGGGCCGGGCCCGGGGAGCCTGTGGTCCAGGC
 GCCCAGCACTTCTGTACGAGGTGCCACCCTGGGTTATGTGCCGTTCTACAAAGTGATGGACGCCCTGG
 AGCCCCGCGACTGGTGCCAGTTCGCGGCCTTGATCGTGCAGGACAGACAGAGCTGCGGCTGTGCGAGCG
 CTCCGAGCAGCGCACAGCCAGTGTCTGTGGCCCTGGATCAACCGCAACGCGCGCTAGCTGACCTCGTT
 CACATCCTCACGCACCTGCAGCTGCTGCGTGCAGGGACATCATCACAGCCTGGCACCTCTGCCCCCG
 TTGTGCCCCCAAGCACCGCTGCCCAAGGCCAGCAGCATCTCTGCAGGCTCTGAGGCGGGGACTGGAG
 CCCCCGAAAATTGCAGTCTCTGCCTCCACCTTCTCTCCCAGCTTTTCCAGGCTCCCAGACCCATTCT
 GAGTCAGAGCTCCTCCAGGTTCCACTCCCTGTTTCCCTCGGGCCACCACTACCATCTTACAGCCCTTCT
 CCACCAAGCAGTCAAGCCAGAGAGCCAGTGTCTGGCCTCAAAGAGCCCATCCCTCCCGTTTTGCTG
 GCCCTTCTGTGAGATTTCCCAAGCACCTGCAACTTCTCTGAAGAACTCAGGATTGGAGAGGGTGGTTTT
 GGATGTGTGACCGAGCAGTCATGAGAAATACTACATATGCTGTGAAGAGACTGAAGGAGGAAGCTGACC
 TAGAGTGGACTATGGTGAACAGAGCTTCTTAACAGAGGTGGAACAGCTATCAAGTTTTGCTCACCCAAA
 TATCGTAGACTTTGCTGGCTACTGTGCAGAGAGTGGCTTATACTGCCTGTTTATGGCTTCTTGCCCAAT
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 CATCAAGAGTTTAACTGCTTCTGGATGAGAGACTGATGCCAAGTGGGAGACTTTGGCTGGCTCGT
 TTCAGCCGCTTTGCGGGGGCCAAAGCAAGCCAGAGCAGTACTGTGGCCCGGACTTCCACAGTTCGAGGTA
 CCCTCGCTACTTGCCTGAGGAGTACATCAAGACAGGCCGACTGGCTGTGGACACCGATACCTTCAGCTT
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 TTGAAAGACCTGATTGAAGATGAGGCTGAAGAGGCTGGAGTGACCCTGAAAAGCACCACCTACTGTG
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 CAGACCTGGGCCCTGCCACCCAGTTGGGCTGGCCCTGGCTCAACTAGCTTGTGCTGCATGCACCGT
 CGGGCCAAGAAGAGGCCCCCATGACCCAGAGGCAAAAACCTCCAACATTCCTTGTCTTGGCTTGTGCTCT
 ATTTGGGAGGTGCTCTGTGGAATAAGTGGTAAAGGGCTGCTGCTTGTGCTGGATGAGCCTCAGATCCCA
 GGAACAGGTATACAAGAGACTAGAAGGGCTTCAGGCAGGGCTCCCTGGGAGCTAGAGGTTGCCGGCCAT
 GGCTCCCTTCCCACAGGAGAATCCTACATGTCTACCACTGGCAGTGGCCAGAGTGGGATGAACCAT
 GGCAGCCTCTAGTAGTGACCACAAGAGCCCGAGCCAGGCTGCCAGCAACTCCAGAGAAGTCCCAACCA
 GCCAGTGGAAAGTGATGAGAGTGTCCCGCCTCTCTGCTACCCTGCATTCTGGCACTTGACTCCAGGT
 TCCACCCAAAGCCAGCGTCCTTCAGAGAGGCTAGCTGTACCCAGGGAGGCACTACCAGAGAATCAAGTG
 TGAGGAGTAGCCAGGCTTCCAGCTACAACCATGGAAGGCTCACCCACGGGCAGCTCATCCCTGCTGTC
 ATCAGAACCACCACAGATCATCATCAACCCAGCCCGACAGAAGATGGTACAAAAGCTGGCTCTTTATGAA
 GAAGGGTCTTGGATAGCCTGCAACTGCTGTCATCAGGCTTTTTCCAGGCTTGGATTTAGAACCTGAAA
 AGAGCCAGGGACTGAAGAAAGTGATGAATTCAGAGCTGATTTGTTCACTCTGACAAATCCCTCAGACT
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 GTGTGGGGCTCACTCTGGCAAAGGAGAGAGGGCAGTGGACCCTGCTGTTCTCAGAATGTGAACACAGC
 AGGGCCAGCCAAAGAATTGATAGAAGCTGATAAGGCAGGCAATGTGAGGCCAGCATTGTGAGCAAGGC
 AAGCAGAGTACCTAAGGAATTGGTAGTACAAAACAGAAGACTGGGGCTGGTGGATGGCTCAGTGGGTA
 TGAGCACCCGATTGCTCTTCAAAGGTCCGGAGTTCAAATCCCAGCAACCACATGGTGGCTCACAACCAT
 CTGTAACAAGATCTGACGCCCTTCTGGAGTGTCTGAAGACAGCTACAGTGTACTTATATATAATAAAT
 AAATCTTTAAAAAAAAAAAAAAAA

Restriction Sites: RsrII-NotI
ACCN: BC004778
Insert Size: 2154 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:	<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.
RefSeq:	BC004778 , AAH04778
RefSeq Size:	2893 bp
RefSeq ORF:	2154 bp
Locus ID:	16179
Cytogenetics:	X 37.61 cM
Gene Summary:	<p>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. Association with MYD88 leads to IRAK1 phosphorylation by IRAK4 and subsequent autophosphorylation and kinase activation. 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 the interferon regulatory factor 7 (IRF7) to induce its activation and translocation to the nucleus, resulting in transcriptional activation of type I IFN genes, which drive the cell in an antiviral state. When sumoylated, translocates to the nucleus and phosphorylates STAT3 (By similarity).</p> <p>[UniProtKB/Swiss-Prot Function]</p>