

Product datasheet for **MR207322**

Irak4 (NM_029926) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Irak4 (NM_029926) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Irak4
Synonyms:	8430405M07Rik; 9330209D03Rik; IRAK-4; NY-REN-64
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR207322 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGAACAAGCCGTTGACACCATCGACATACATACGCAACCTTAATGTGGGGATCCTTAGGAAGCTGTCCG
 ATTTTATTGATCCTCAAGAAGGGTGAAGAAATTAGCAGTAGCTATCAAAAAGCCGTCGGCGACGACAG
 ATACAATCAGTTCATATAAGGAGATTCGAAGCCTTACTTCAGACCGGGAAGAGCCACCTGTGAAGT
 CTGTTTACTGGGGCACCACGAAGTGCACAGTTGGCGACCTTGTGGATCTACTGGTCCAGATTGAGCTGT
 TTGCCCCCGCACTCTCCTGCTGCCGATGCCGTTCCCAAACCGTCAAAAGCCTGCCTCTAGAGAAGC
 GGCAACAGTGGCACAACACACGGGCTTGTGAGAAAAGGACAGGACATCCGTAATGCCTATGCCGAAG
 CTAGAACACAGCTGCGAGCCACCGACTCCTCAAGCCCAGACAACAGAAGTGTAGAGTCCAGCGACTC
 GGTCCACAGCTTCTCGTTCATGAAGTGAAGAGCATCACAACAACCTTCGACGAGCAACCCGCTGTC
 CGGTGGCAACCGGATGGGAGAGGGGGGATTTGGAGTGGTGTACAAGGGCTGTGTGAACAACCCATCGT
 GCGGTGAAGAAGCTCGGAGCGATGGTTGAAATCAGTACTGAAGAACTAAAGCAACAGTTTGTCAAGAAA
 TTAAGTAATGGCAACGTGTCAGCACGAGAACCCTGGTGGAGCTGCTCGGCTTCTCCAGCGACAGCGCAA
 CCTGTGCTTAGTGTATGCTTACATGCCAACGGTCTTGTGGACAGACTGTCTGCTGGATGGTACA
 CCACCGCTTCTCGGACACAAGGTGCAAGGTTGCTCAGGGGACAGCAATGGCATCAGGTTTCTGCATG
 AAAATCATCACATTCATAGAGATATTAAGTGAAGTATCTTACTAGACAGAGACTTTACTGCCAAAT
 ATCTGACTTTGGGCTTGCACGGGCTTCGGCAAGGCTAGCGCAGACGGTCTGACCCAGCGAATCGTGGGC
 ACAACGGCTTACATGGCACCCGAAGCTTTCGGGGGAGAAAACACCCAAATCTGACATCTACAGCTTCC
 GCGTGGTCTGTTGGAGCTGATAACCGGGCTGGCGGCTGTGGATGAAAACCGTGAACCTCAACTACTGCT
 GGATATTAAGAAGAGATTGAAGATGAAGAGAAGACGATTGAAGATTACCGGATGAGAAGATGAGCGAT
 GCGGACCTGCTTCCGGTGAAGCAATGACTCTGCTGCTAGCCAGTGTCTGCATGAGAAGAAAACAGAC
 GCCAGACATTGCAAAGTTCAACAGCTGCTACAAGAGATGTCTGCT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR207322 protein sequence
 Red=Cloning site Green=Tags(s)

MNKPLTPSTYIRNLNVGILRKLSDFIDPQEGWKKLAVAIKKPSGDDRYNQFHIRRFEALLQTGKSPTCEL
 LFDWGTNCTVGDLDLLVQIELFAPATLLLPDAVPQTVKSLPPREAATVAQTHGPCQEKDRTSVMPPMK
 LEHSCEPPDSSSPDNRSVSSDTRFHSFSFHELKSIITNNFDEQPASAGGNRMGEGGFVVYKGCVNNTIV
 AVKKLGAMVEISTEELKQQFDQEIKVMAQCQHENLVELLGFSSDSNDLCLVYAYMPNGSLDRLSCLDGT
 PPLSWHTRCKVAQGTANGIRFLHENHHIHRDIKSANILLDRDFTAKISDFGLARASARLAQTVMTSRIVG
 TTAYMAPEALRGEITPKSDIYSFGVLLLELITGLAAVDENREPQLLLDIKEEIEDEEKTIEDYTDKMSD
 ADPASVEAMYSAAQCLHEKKNRRPDIKVVQQLQEMSA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_029926

ORF Size: 1380 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: [NM_029926.2](#), [NM_029926.3](#), [NM_029926.4](#), [NM_029926.5](#), [NP_084202.2](#)

RefSeq Size: 2825 bp

RefSeq ORF: 1380 bp

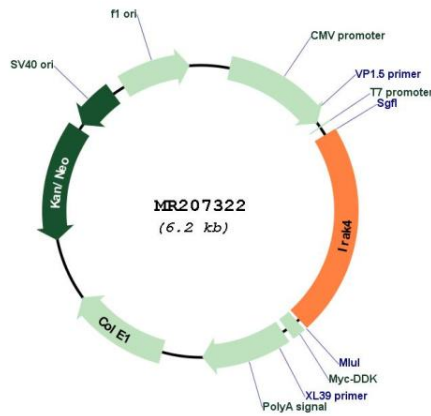
Locus ID: 266632

UniProt ID: [Q8R4K2](#)

Cytogenetics: 15 E3
MW: 50.9 kDa

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]

Product images:



Circular map for MR207322