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Product datasheet for MG207322

Irak4 (NM_029926) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Irak4 (NM_029926) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Irak4
Synonyms:	8430405M07Rik; 9330209D03Rik; IRAK-4; NY-REN-64
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

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ORF Nucleotide Sequence:

>MG207322 representing NM_029926
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAACAAGCCGTTGACACCATCGACATACATACGCAACCTTAATGTGGGGATCCTTAGGAAGCTGTCGG
ATTTTATTGATCCTCAAGAAGGGTGGAAGAAATTAGCAGTAGCTATCAAAAAGCCGTCCGGCGACGACAG
ATACAATCAGTTCCATATAAGGAGATTCGAAGCCTTACTTCAGACCGGGAAGAGCCCCACCTGTGAACTG
CTGTTTGACTGGGGCACCACGAACTGCACAGTTGGCGACCTTGTGGATCTACTGGTCCAGATTGAGCTGT
TTGCCCCCGCCACTCTCCTGCTGCCGGATGCCGTTCCCCAAACCGTCAAAAGCCTGCCTCCTAGAGAAGC
GGCAACAGTGGCACAAACACACGGGCCTTGTCAGGAAAAGGACAGGACATCCGTAATGCCTATGCCGAAG
CTAGAACACAGCTGCGAGCCACCGGACTCCTCAAGCCCAGACAACAGAAGTGTAGAGTCCAGCGACACTC
GGTTCCACAGCTTCTCGTTCCATGAACTGAAGAGCATCACAAACAACTTCGACGAGCAACCCGCGTCTGC
CGGTGGCAACCGGATGGGAGAGGGGGGATTTGGAGTGGTGTACAAGGGCTGTGTGAACAACACCATCGTG
GCGGTGAAGAAGCTCGGAGCGATGGTTGAAATCAGTACTGAAGAACTAAAGCAACAGTTTGATCAAGAAA
TTAAAGTAATGGCAACGTGTCAGCACGAGAACCTGGTGGAGCTGCTCGGCTTCTCCAGCGACAGCGACAA
CCTGTGCTTAGTGTATGCTTACATGCCCAACGGGTCCTTGCTGGACAGACTGTCCTGCCTGGATGGTACA
CCACCGCTTTCCTGGCACACAAGGTGCAAGGTTGCTCAGGGGACAGCAAATGGCATCAGGTTTCTGCATG
AAAATCATCACATTCATAGAGATATTAAAAGTGCAAATATCTTACTAGACAGAGACTTTACTGCCAAAAT
ATCTGACTTTGGGCTTGCACGGGCTTCGGCAAGGCTAGCGCAGACGGTCATGACCAGCCGAATCGTGGGC
ACAACGGCTTACATGGCACCCGAAGCTTTGCGGGGAGAAATAACACCCAAATCTGACATCTACAGCTTCG
GCGTGGTTCTGTTGGAGCTGATAACCGGGCTGGCGGCTGTGGATGAAAACCGTGAACCTCAACTACTGCT
GGATATTAAAGAAGAGATTGAAGATGAAGAGAAGACGATTGAAGATTACACGGATGAGAAGATGAGCGAT
GCGGACCCTGCTTCGGTGGAAGCAATGTACTCTGCTGCTAGCCAGTGTCTGCATGAGAAGAAAAACAGAC
GGCCAGACATTGCAAAGGTTCAACAGCTGCTACAAGAGATGTCTGCT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

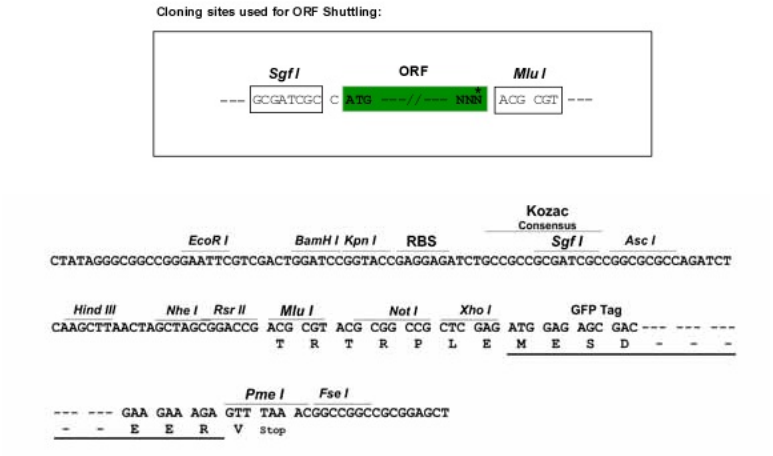
>MG207322 representing NM_029926
Red=Cloning site Green=Tags(s)

MNKPLTPSTYIRNLNVGILRKLSDFIDPQEGWKKLAVAIKKPSGDDRYNQFHIRRFEALLQTGKSPTCEL
LFDWGTTNCTVGDLVDLLVQIELFAPATLLLPDAVPQTVKSLPPREAATVAQTHGPCQEKDRTSVMPMPK
LEHSCEPPDSSSPDNRSVESSDTRFHSFSFHELKSITNNFDEQPASAGGNRMGEGGFGVVYKGCVNNTIV
AVKKLGAMVEISTEELKQQFDQEIKVMATCQHENLVELLGFSSDSDNLCLVYAYMPNGSLLDRLSCLDGT
PPLSWHTRCKVAQGTANGIRFLHENHHIHRDIKSANILLDRDFTAKISDFGLARASARLAQTVMTSRIVG
TTAYMAPEALRGEITPKSDIYSFGVVLLELITGLAAVDENREPQLLLDIKEEIEDEEKTIEDYTDEKMSD
ADPASVEAMYSAASQCLHEKKNRRPDIAKVQQLLQEMSA

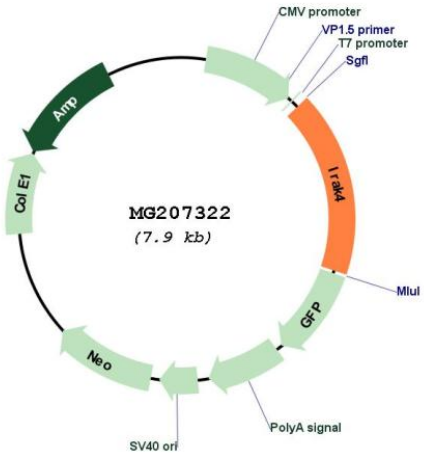
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_029926

ORF Size: 1377 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_029926.3, NP_084202.2
RefSeq Size:	2481 bp
RefSeq ORF:	1380 bp
Locus ID:	266632
UniProt ID:	Q8R4K2
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]