

Product datasheet for **MG226446**

Ifih1 (NM_027835) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ifih1 (NM_027835) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Ifih1
Synonyms:	9130009C22Rik; Helicard; Hlcd; MDA5; RLR-2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG226446 representing NM_027835 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGTGCGATTGTCTGTTCTGCAGAGGACAGCTTCAGGAATCTCATCTTATTCTTCAGGCCAGGCTGAAAA
TGTACATTCAGGTGGAGCCAGTCTGGACCACCTCATCTTTCTGTCTGCAGAAACAAAGAGCAGATTCT
TAAAAAGATCAACACCTGTGGTAACACCAGCGCGGAGAACTGCTGCTGAGCACCTTGGAGCAGGGACAA
TGGCCTCTGGGATGGACGCAGATGTTCTGGAGGCCCTAGAGCACAGTGGCAATCCCTAGCCGCGCGCT
ATGTCAAACCCACTCACTGATCTGCCCTCTCCTTCTCTGAGACTGCCATGACGAGTGTCTCCACTT
GCTGACCCTCCTCCAGCCCACTTTGGTGGACAACTTCTGATTAACGATGCTTGGACACTTGCTTCGAG
AAGGGACTATTGACAGTCGAAGACAGAAATCGGATTTCTGCTGCAGGAAACAGCGGGAATGAGTCAGGTG
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AACTGGAAATGATGCACTATTCCAAGAACTAACAGGTGGAGGCTGCCAGAAACACACAGACTTGGCT
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GAGAAACAATGACCTCAAGAAACAAAACAAACAGCCATTCCTGCCGAGATACTAGGACTGACAGCT



TCACCTGGTGTGGAGCAGCCAAAAAGCAGTCTGAGGCTGAAAAACATATTTTAAATATATGTGCCAATC
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 AGTCAAAAAGAAGCATTGCAAAGCAATACAACGACAATCCATCGTTAATAACACTTCTCTGAAAAATTTGT
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 AATTCAGGGACTCTACATTGTAAGAGAAAAACAAGCACTGCAAAAAGAAATTTGCTGATTATCAGACCAA
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 TGTCTTAAAATAAGGAATTTGTAGTCAATTTCAAAAATAACTCACCGAAGAAACAGTACAAGAATGGG
 TGAATTGCCTATCAGATTTCTGATCTTGACTACTCAGAATACTGCTTGTATAGTATGATGAAGAT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG226446 representing NM_027835
 Red=Cloning site Green=Tags(s)

MSIVCSAEDSFRNLILFFRPLKMYIQVEPVL DHLIFLSAETKEQILKKINTCGNTSAAELLLSTLEQGG
 WPLGWTQMFVEALEHSGNPLAARYVKPTLTDLPSPSETAHDECLHLLTLLQPTLVDKLLINDVLDTCFE
 KGLLTVEDRNRI SAAGNSGNE SGVRELLRRIVQKENWFSTFLDVL RQTGNDALFQELTGGCPEDNTDLA
 NSSHRDGAANECLLPVDESSLETEAWNVDILPEASCTDSSVTTESDTSLAEGSVSCFDES LGHNSNM
 GRDSGTMGSDSDESVIQTKRVSPPELQLRPYQMEVAQPALDGKNI IICLPTGSGKTRVAVYITKDHLDK
 KKQASESGKVIVLVNKVMLAEQLFRKEFNPYLKKWYRI IGLSGDTQLKISFPEVVKSYDVI I STAQILEN
 SLLNLESGDDGVQLSDFSL I IDECHHTNKEAVYNNIMRRYLKQKLRNNDLKKQNKPAIPLPQILGLTA
 SPGVGAACKQSEAEKHILNICANLDAFTIKTVKENLGQLKHQIKEPCKK FVIADDTRENPFKEKLEIMA
 SIQTYCQKSPMSDFGTQHYEQWAIQMEKKA AKDGNRKRDRVCAEHLRKYNEALQINDTIRMIDAYSHLETF
 YTDEKEKFAVLNDSKSDDEASSCNDQLKGDVKKSLKLD EDEF LMNLF FDNKMLKKL AENPKYENEK
 LIKLRNTILEQFTRSEESSRGI IFTKTRQSTYALSQWIMENAKFAEVGVKAHHL IGAGHSSEVKPMTQTE
 QKEVISKFRTEINLLIATTVAEEGLDIKECNIVIRYGLVTNEIAMVQARGRARADESTYVLTSSSGSV
 TEREIVNDFREKMMYKAINRVQNMKPEEYAHKILELQVQSILEKMKVKRSIAKQYNDNPSLITLLCKNC
 SMLVCSGENIHVIEKMHHVNMTPFEFKGLYIVRENKALQKFFADYQTNGE IICKCGQAWGTMVHKGLDLP
 CLKIRNFVNFKNNSPKKQYKKWVLP IIRFPDLDYSEYCLYSDED

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-Mlul

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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_027835.3](#), [NP_082111.2](#)

RefSeq Size: 5519 bp

RefSeq ORF: 3078 bp

Locus ID: 71586

UniProt ID: [Q8R5F7](#)

Cytogenetics: 2 C1.3

Gene Summary:

Innate immune receptor which acts as a cytoplasmic sensor of viral nucleic acids and plays a major role in sensing viral infection and in the activation of a cascade of antiviral responses including the induction of type I interferons and proinflammatory cytokines. Its ligands include mRNA lacking 2'-O-methylation at their 5' cap and long-dsRNA (>1 kb in length). Upon ligand binding it associates with mitochondria antiviral signaling protein (MAVS/IPS1) which activates the IKK-related kinases: TBK1 and IKKε which phosphorylate interferon regulatory factors: IRF3 and IRF7 which in turn activate transcription of antiviral immunological genes, including interferons (IFNs); IFN-α and IFN-β. Responsible for detecting the Picornaviridae family members such as encephalomyocarditis virus (EMCV), mengo encephalomyocarditis virus (ENMG), and theiler's murine encephalomyelitis virus (TMEV). Can also detect other viruses such as dengue virus (DENV), west Nile virus (WNV), and reovirus. Also involved in antiviral signaling in response to viruses containing a dsDNA genome, such as vaccinia virus. Plays an important role in amplifying innate immune signaling through recognition of RNA metabolites that are produced during virus infection by ribonuclease L (RNase L). May play an important role in enhancing natural killer cell function and may be involved in growth inhibition and apoptosis in several tumor cell lines.[UniProtKB/Swiss-Prot Function]