

## Product datasheet for **MC220826**

### Ifih1 (NM\_001164477) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Ifih1 (NM_001164477) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Ifih1
Synonyms:	9130009C22Rik; Helicard; Hlcd; MDA5; RLR-2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**Fully Sequenced ORF:** >MC220826 representing NM\_001164477  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGTCGATTGTCTGTTCTGCAGAGGACAGCTTCAGGAATCTCATCTTATTCTTCAGGCCAGGCTGAAAA  
 TGTACATTCAGGTGGAGCCAGTCTGGACCACCTCATCTTTCTGTCTGCAGAAACCAAAGAGCAGATTCT  
 TAAAAAGATCAACACCTGTGGTAAACACCAGCGCCGAGAACTGCTGCTGAGCACCTTGGAGCAGGGACAA  
 TGGCCTCTGGGATGGACGCAGATGTTCTGGAGGCCCTAGAGCACAGTGGCAATCCCCTAGCCGCGCGCT  
 ATGTCAAACCCACTCACTGATCTGCCCTCTCCTTCTCTGAGACTGCCCATGACGAGTGTCTCCACTT  
 GCTGACCTCCTCCAGCCACTTTGGTGGACAACTTCTGATTAACGATGCTTGGACACTTGCTTCGAG  
 AAGGGACTATTGACAGTGAAGACAGAAATCGGATTTCTGCTGCAGAAACAGCGGGAATGAGTCAGGTG  
 TAAGAGAGCTGCTGAGAAGGATTGTGAGAAGGAAAAGTGGTTTTCTACCTTCTGGATGTTCTGCGCCA  
 AACTGGAATGATGCACTATTCCAAGAATAACAGGTGGAGGCTGCCAGAACACACAGAATCAGAC  
 ACAAGTTTGGCAGAAGGAAGTGTGAGCTGCTTCGATGAAAGTCTTGGACATAACAGCAACATGGGCAGGG  
 ATTCAGGCACCATGGGAAGTGATTGAGATGAAAGTGTATCCAGACAAAAAGAGTATCCCCGAGCCAGA  
 ACTGCAGCTCAGGCCCTACCAATGGAAGTGGCCCAACCAGCTCTAGATGGGAAGAATATTATTATCTGC  
 CTCCCCACGGGAGTGGGAAAACAGAGTGGCTGTTTACATCACCAAGATCACTTAGACAAGAAGAAGC  
 AGGCATCTGAATCCGGGAAGGTTATCGTTCTGTCAATAAGGTAATGTTAGCAGAACAACCTTTCCGAAA  
 AGAGTTCAACCCATATTTGAAGAAATGGTATCGAATTATTGGATTAAGTGGCGATACCCAGCTGAAAATA  
 TCATTTCCAGAAGTTGTCAAATCTACGATGTTATTATCAGCACTGCTCAAATCCTTGAAAACCTCCTCT  
 TAAATCTGGAGAGTGGAGACGATGACGGTGTGACGCTGTGACAGCTTCTCTCATTATCATTGATGATG  
 CCATCACACCAACAAGGAGGCGAGTCTATAACAACATCATGAGACGATATTTGAAGCAGAAGCTGAGAAAC  
 AATGACCTCAAGAAACAAAAACAACCAGCCATTCCCCTGCCGAGATACTAGGACTGACAGCTTCCCTG  
 GTGTTGGAGCAGCAAAAAGCAGTCTGAGGCTGAAAAACATATTTTAAATATATGTGCCAATCTTGATGC  
 CTTTACCATTAACAGTGAAGAGAATCTTGGTCAACTCAAACACCAAAATAAGGAACCATGCAAGAAA  
 TTTGTGATTGCTGATGACACCAGAGAAAATCCATTTAAGAGAAAATTCTAGAAATTATGGCAAGCATT  
 AGACTTACTGCCAAAAAGTCCAATGTCAGATTTTGAACCAACATTATGAGCAGTGGGCCATTCAAAT  
 GGAGAAAAAGCTGCTAAAGACGGAATCGAAAGATCGCGTCTGTGCAGAACATTTGAGGAAGTACAAC  
 GAAGCCCTACAAATCAACGACACGATCCGAATGATTGATGCATATAGCCCTGGAGACATTCTACACTG  
 ATGAGAAAAGAAAAGATTTCGAGTCTCAATGACAGCGACAAGAGTGTGACGAGGCCAGCAGTTGCAA  
 TGACCAACTTAAGGGCGATGTAAGAAAATCTTTGAAACTGGACGAAACGGATGAATTTCTCATGAATTTG  
 TTCTTTGATAACAAGAAAATGTTGAAAAACTAGCTGAAAACCCAAAATACGAGAATGAAAAACTCATT  
 AATTAAGAAACACGATACTGGAACAATTCACAAGTCTGAGGAGTCTCCCGAGGAATATTTTTACAAA  
 AACACGACAGACACCTACGCACCTTCCAGTGGATCATGGAAAATGCAAAGTTTGGCGAAGTTGGAGTC  
 AAAGCGCATCACCTGATTGGCGCGGGCACAGCAGTGAAGTCAAGCCATGACTCAGACTGAACAAAAAG  
 AAGTCATTAGTAAATTTGCAGTGGCGAAAATAATCTGCTTATCGCTACGACGGTGGCAGAGGAAGGCC  
 GGATATCAAAGAGTCAATATTGTTATTGCTTATGGCCTTGTACGAAACGAGATAGCCATGGTCCAGGCC  
 CGGGGTGAGCCAGAGCTGATGAAAGCAGTATGCTCTGGTACCAGCAGTGGCTCAGGAGTTACCGAAC  
 GGGAGATTGTTAATGATTTCCGAGAGAAGATGATGATAAAGCTATTAACCGTGTTCAAAACATGAAACC  
 AGAGGAGTATGCACATAAGATTTTGAATTGCAGGTGCAAAGTATCCTGGAAAAGAAAATGAAAAGTCAAA  
 AGAAGCATTGCAAAGCAATACAACGACAATCCATCGTTAATAACACTTCTCTGCAAAAATTTAGCATGC  
 TGGTCTGCTCGGGAGAAAACATCCATGTCATTGAGAAGATGCATCATGCAATATGACACCAGAATTCAA  
 GGGACTTACATTGTAAGAGAAAACAAGCACTGCAAAAAGAAAATTTGCTGATTATCAGACCAATGGAGAG  
 ATTATCTGCAAGTGTGGCCAGGCTTGGGAACAATGATGGTGCACAAAGGTTTAGATTTGCCTTGTCTTA  
 AAATAAGGAATTTGTAGTCAATTTCAAAAATAACTCACGAAGAAGCAGTACAAGAAGTGGGTGGAATT  
 GCCTATCAGATTTCTGATCTTGACTACTCAGAATACTGCTTGTATAGTATGATGAAGATTAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAAAACCTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

<b>Restriction Sites:</b>	Sgfl-Mlul
<b>ACCN:</b>	NM_001164477
<b>Insert Size:</b>	2931 bp
<b>OTI Disclaimer:</b>	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).
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u><a href="#">NM_001164477.1</a></u> , <u><a href="#">NP_001157949.1</a></u>
<b>RefSeq Size:</b>	5372 bp
<b>RefSeq ORF:</b>	2931 bp
<b>Locus ID:</b>	71586
<b>UniProt ID:</b>	<u><a href="#">Q8R5F7</a></u>
<b>Cytogenetics:</b>	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]

Transcript Variant: This variant (2) lacks an exon in the 3' coding region, compared to variant 1. The encoded isoform (2) is shorter than isoform 1. Sequence Note: The RefSeq transcript and protein were derived from genomic sequence to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on alignments.