

## Product datasheet for **MG225565**

### Irf1 (NM\_001159393) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Irf1 (NM\_001159393) Mouse Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** Irf1  
**Synonyms:** AU020929; Irf-1  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >MG225565 representing NM\_001159393  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGCCAATCACTCGAATGCGGATGAGACCCTGGCTAGAGATGCAGATTAATTCCAACCAATCCCAGGGC  
 TGATCTGGATCAATAAAGAAGAGATGATCTTCCAGATTCCATGGAAGCACGCTGCTAAGCACGGCTGGGA  
 CATCAACAAGGATGCCTGTCTGTTCCGGAGCTGGGCCATTCACACAGGCCGATACAAAGCAGGAGAAAAA  
 GAGCCAGATCCCAAGACATGGAAGGCAAACCTCCGTTGTGCCATGAACCTCCCTGCCAGACATCGAGGAAG  
 TGAAGGATCAGAGTAGGAACAAGGGCAGCTCTGCTGTGCGGGTGTACCGGATGCTGCCACCCCTCACCAG  
 GAACCAGAGGAAAAGAGAGAAAGTCCAAGTCCAGCCGAGACACTAAGAGCAAACCAAGAGGAAGCTGTGT  
 GGAGATGTTAGCCCGGACACTTTCTCTGATGGACTCAGCAGCTCTACCCTACCTGATGACCACAGCAGTT  
 ACACCACTCAGGGCTACCTGGGTCAGGACTTGGATATGGAAGGGACATAACTCCAGCACTGTCACCGTG  
 TGTCGTGAGCAGCAGTCTCTCTGAGTGGCATATGCAGATGGACATTATACCAGATAGCACCCTGATCTG  
 TATAACCTACAGGTGTCACCCATGCCTTCCACCTCCGAAGCCGCAACAGACGAGGATGAGGAAGGGAAGA  
 TAGCCGAAGACCTTATGAAGCTCTTGAACAGTCTGAGTGGCAGCCGACACACATCGATGGCAAGGGATA  
 CTTGCTCAATGAGCCAGGGACCCAGCTCTCTTCTGTCTATGGAGACTTCAGCTGCAAAGAGGAACCCAGAG  
 ATTGACAGCCCTCGAGGAAACCTCCTGATGGGAGTCTTTTGCTGGCTTTCTGCTGGGCTTCAGCTGAGC  
 AT

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >MG225565 representing NM\_001159393  
 Red=Cloning site Green=Tags(s)

MPITRMRMRPWLEMQINSNQIPLIWINKEEMIFQIPWKHAAKHGWDINKDACLFRSWAIHTGRYKAGEK  
 EPDPKTWKANFRFCAMNSLPDIEEVKDKSRNKGSSAVRVYRMLPPLTRNQRKERKSKSSRDTKSKTKRKLK  
 GDVSPDTFSDGLSSSTLPDDHSSYTTQGYLGQDLDMERDITPALSPCVVSSSLSEWHMQMDIIPDSTDL  
 YNLQVSPMPSTSEAATDEDEEGKIAEDLMKLEQSEWQPTHIDGKGYLLNEPGTQLSSVYGDFSCKEEPE  
 IDSPRGNLLMGVFCWLSAWASAEH

TRTRPLE - GFP Tag - V

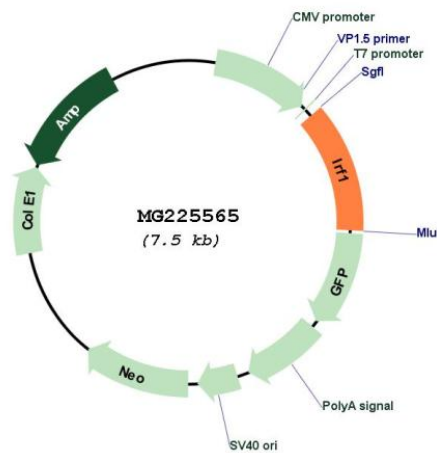
**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



**Plasmid Map:**



**ACCN:** NM\_001159393

**ORF Size:** 912 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<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>	<a href="#">NM_001159393.1</a> , <a href="#">NP_001152865.1</a>
<b>RefSeq Size:</b>	2128 bp
<b>RefSeq ORF:</b>	915 bp
<b>Locus ID:</b>	16362
<b>Cytogenetics:</b>	11 32.0 cM

**Gene Summary:**

Transcriptional regulator which displays a remarkable functional diversity in the regulation of cellular responses. These include the regulation of IFN and IFN-inducible genes, host response to viral and bacterial infections, regulation of many genes expressed during hematopoiesis, inflammation, immune responses and cell proliferation and differentiation, regulation of the cell cycle and induction of growth arrest and programmed cell death following DNA damage. Stimulates both innate and acquired immune responses through the activation of specific target genes and can act as a transcriptional activator and repressor regulating target genes by binding to an interferon-stimulated response element (ISRE) in their promoters. Its target genes for transcriptional activation activity are: genes involved in anti-viral response, such as IFN-alpha/beta, DDX58/RIG-I, TNFSF10/TRAIL, OAS1/2, PIAS1/GBP, EIF2AK2/PKR and RSAD2/viperin; antibacterial response, such as NOS2/INOS; anti-proliferative response, such as p53/TP53, LOX and CDKN1A; apoptosis, such as BBC3/PUMA, CASP1, CASP7 and CASP8; immune response, such as IL7, IL12A/B and IL15, PTGS2/COX2 and CYBB; DNA damage responses and DNA repair, such as POLQ/POLH; MHC class I expression, such as TAP1, PSMB9/LMP2, PSME1/PA28A, PSME2/PA28B and B2M and MHC class II expression, such as CIITA. Represses genes involved in anti-proliferative response, such as BIRC5/survivin, CCNB1, CCNE1, CDK1, CDK2 and CDK4 and in immune response, such as FOXP3, IL4, ANXA2 and TLR4. Stimulates p53/TP53-dependent transcription through enhanced recruitment of EP300 leading to increased acetylation of p53/TP53. Plays an important role in immune response directly affecting NK maturation and activity, macrophage production of IL12, Th1 development and maturation of CD8+ T-cells. Also implicated in the differentiation and maturation of dendritic cells and in the suppression of regulatory T (Treg) cells development. Acts as a tumor suppressor and plays a role not only in antagonism of tumor cell growth but also in stimulating an immune response against tumor cells.[UniProtKB/Swiss-Prot Function]