

## Product datasheet for **MG211364**

### **Csf1r (NM\_001037859) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Csf1r (NM_001037859) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Csf1r
Synonyms:	AI323359; CD115; CSF-1R; Csfmr; Fim-2; Fim2; Fms; M-CSF-R; M-CSFR
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG211364 representing NM\_001037859  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGAGTTGGGGCCTCCTCTGGTCTGCTGCTGGCCACAGTTTGGCATGGTCAGGGGGCCCTGTGATCG  
 AGCCTAGTGGCCAGAAGCTGTTGTAGAGCCGGGTGAAACGGTGACCCCTGCGATGTGTGAGCAATGGCAG  
 TGTGGAATGGGATGGCCCATCTCTCCCTACTGGACCTTGGACCTGAATCTCCCGGAAGCACCCCTGACC  
 ACAAGAAACGCGACCTTCAAAAACACTGGGACCTACCGTTGTACCGAGCTTGAAGACCCCATGGCAGGCA  
 GTACCACCATCCACTTGTATGTCAAAGATCCGGCCCACTTGGAAATTTGCTGGCACAGGAGGTGACAGT  
 GGTGAGGGCCAGGAAGCTGTGCTGCCCTGTCTGATCACTGACCCCTGCACTGAAGGACAGTGTCTCACTG  
 ATGCGTGAGGGGGCAGGACAGTCTTACGCAAAACGGTCTACTTCTTCGCCATGGCGAGGGTTTCA  
 TCCGAAGGCTAAAGTCTTGACAGCAATACCTACGTGTGCAAGACCATGGTGAATGGTAGGGAATCCAC  
 CTCCTACTGGCATCTGGCTTAAGGTGAATCGAGTCCACCCAGAGCCCCACAGATAAAAATTGGAGCCTAGC  
 AAGCTGGTGGGATTTCGAGGGGAGGCTGCGCAGATCGTGTGCTCGGCCACTAACGCCGAAGTGGGATTCA  
 ACGTTATCCTCAAACGTGGAGACACCAAGCTGGAATCCCCCTAAACAGTGACTTCCAAGATAACTATTA  
 TAAAAAGTCCGGGCTCTCAGTCTCAACGCTGTGGACTTCCAAGACGCTGGCATATATTCTGTGTGGCC  
 AGCAATGATGTTGGCACACGCACGGCCACCATGAACCTCCAGGTGGTGGAGAGTGCCTACTTAAACTTGA  
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 CTACCCTAGCATACAGCATTACAACCTGGACCTACCTAGGTCCATTCTTTGAAGACCAGCGCAAGCTTGAG  
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 CGGGCCAGTACTTCTTAATGGCACAAAACAAGGCAGGCTGGAATAATCTGACCTTTGACCTCACCCCTCGG  
 ATATCCCCCAGAGGTCAAGTGTACATGGATGGCTGTGAATGGCTCTGATGTCCTGTTCTGTGACGCTCT  
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 CTTTGCAGGTTTGAATGACACCCACCCTGAAGTCTGAGTCAGAAGCCCTTCGACAAAAGTATCATTCA  
 GAGCCAGCTGCCATTGGGACCTTAAAACAACATGACTTATTTTTGAAAACCCACAACAGTGTGGGT  
 AACAGCTCTCAGTACTTCAGGGCCGTCTCCCTAGGACAAAGCAAGCAGCTCCCGATGAGTCCCTTCA  
 CTCCGGTGGTGGTGGCCTGTATGTCTGTGATGTCTGCTGGTGTACTGCTGTTGCTGCTTTGTACAA  
 GTACAAGCAGAAGCCGAAGTACCAGGTGCGCTGGAAGATCATCGAGAGATACGAAGGCAATAGTACACC  
 TTCATTGACCCTACTCAGTTGCCCTACAATGAGAAGTGGGAGTCCCTCGGAACAACCTGCAGTTTGGTA  
 AGACTCTAGGAGCCGGTGCCTTTGGGAAGTGGTGGAGGCTACAGCCTTTGGTCTGGGCAAGAAGATGC  
 AGTGTGAAGGTGGCTGTGAAGATGCTAAAGTCCACGGCTCATGCTGATGAGAAGGAGGCCCTGATGTCA  
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 GAGGACCTGTCTGGTCACTGAATACTGCTGCTATGGAGACCTACTCAACTTCTCCGAAGGAAGGC  
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 TGAGGCCTGTCTGACTTCTTCAAGTACTCCTTCTTTAAGCAAGATCTGGACAAAGAGCCAGCCGGCC  
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 AACTGCATCCACCGGACGTAGCAGCTCGAAACGTGCTGTTGACCAGCGGACATGTGGCCAAGATTGGGG  
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 ATCCTCCTCTGGGAGATCTTCTCGCTTGGTCTGAACCCCTACCCCGGCATCCTAGTGAACAACAAGTTCT  
 ACAAACTGGTGAAGGATGGATACCAATGGCCAGCCTGTATTTGACCCGAAGAACATATACAGCATCAT  
 GCAGTCTGCTGGGACCTGGAGCCTACCAGAAGACCCACCTTCCAACAGATCTGCTTCTCCTCCAGGAG  
 CAGGCCCGACTGGAGAGGAGAGACCAGGACTATGCTAACCTGCCAAGCAGCGGTGGCAGCAGCGGCAGT  
 ACAGTGGTGGTGGCAGCAGCGGTGGCAGCAGCAGTGGCCAGAAGAGGAGAGCTCCAGTGAACACCTGGC  
 CTGCTGTGAGCCAGGGGACATCGCCAGCCCTGCTGCAGCCTAACAACTACCAGTCTGCT

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:** >MG211364 representing NM\_001037859  
 Red=Cloning site Green=Tags(s)

MELGPPLVLLLATVWHGQGAPVIEPSGPELVVEPGETVTLRCVSNQSVVEWDGPISPYWTLDPESPGSTLT  
 TRNATFKNTGTyrCTELEDPMAGSTTIIHLVYKDPAHSWNLLAQEVTVVEGQEA VLPCLITDPALKDSVSL  
 MREGGRQVLRKT VYFFSPWRGFIIRKAKVLD SNTYVCKTMVNGRESTSTGIWLKVN RVHPPEPPQIKLEPS  
 KLVIRGEAAQIVCSATNAEVGFNVILKRGDTKLEIPLNSDFQDNYYKKVRALSLNAVDFQDAGIYSCVA  
 SNDVGT RTATMNFQVVESAYLNL TSEQSL LQEVS VGD SLILTVHADAYPSIQHYNWTYLGPF FEDQRKLE  
 FITQRAIYRYTFKLF LNRVKASEAGQYFLMAQNKAGWNNTFELTLRYPPEVSVTWMPVNGSDVLFCDVS  
 GYPQPSVTWMECRGHTDRCD E AQALQVWNDTHPEVLSQKPFDKV I IQSQLPIGTLKHNMTYFCKTHNSVG  
 NSSQYFRAVSLGQSKQLPDESLF TPVVVACMSVMSLLVLLLLLLLYKYKQPKYQVRWKI IERYEGNSYT  
 FIDPTQLPYNEKWEFPRNQLQFGKTLGAGAFGKVEEATAFGLGKEDAVLKVAVKMLKSTAHADKEALMS  
 ELKIMSHLQHENIVNLLGACTHGGPVLVITEYCCYGDLLNFLRRKAEAMLGPSLSPGQDSEGDSSYKNI  
 HLEKKYVRRDSGFSSQGVDTYVEMRPVSTSSDSFFKQDL DKEASRPLELWDL LHFSSQVAQGMFLASK  
 NC IHRDVAARNVLLTSGHVAKIGDFGLARDIMNDSNYVVKGNARLPVKWMAPESIFDCVYTVQSDVWSYG  
 ILLWEIFSLGLNPYPGILVNNKFYKLVKDG YQMAQPVFAPKNIYSIMQSCWDLEPTRRPTFQQICFL LQE  
 QARLERRDQDYANLPSSGGSSGSDSGGGSSGGSSSEPEEESSSEHLACCEPGDIAQPLLQPNNYQFC

TRTRPLE - GFP Tag - V

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



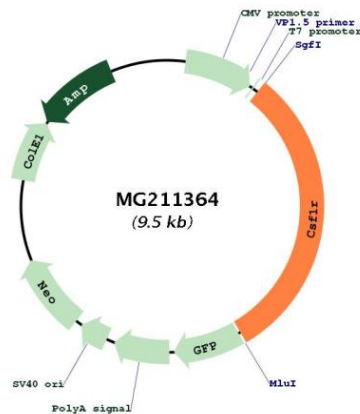
**ACCN:** NM\_001037859

**ORF Size:** 2931 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_001037859.2</a> , <a href="#">NP_001032948.2</a>
<b>RefSeq Size:</b>	3875 bp
<b>RefSeq ORF:</b>	2934 bp
<b>Locus ID:</b>	12978
<b>UniProt ID:</b>	<a href="#">P09581</a>
<b>Cytogenetics:</b>	18 34.41 cM

**Gene Summary:**

Tyrosine-protein kinase that acts as cell-surface receptor for CSF1 and IL34 and plays an essential role in the regulation of survival, proliferation and differentiation of hematopoietic precursor cells, especially mononuclear phagocytes, such as macrophages and monocytes. Promotes the release of proinflammatory chemokines in response to IL34 and CSF1, and thereby plays an important role in innate immunity and in inflammatory processes. Plays an important role in the regulation of osteoclast proliferation and differentiation, the regulation of bone resorption, and is required for normal bone and tooth development. Required for normal male and female fertility, and for normal development of milk ducts and acinar structures in the mammary gland during pregnancy. Promotes reorganization of the actin cytoskeleton, regulates formation of membrane ruffles, cell adhesion and cell migration, and promotes cancer cell invasion. Activates several signaling pathways in response to ligand binding. Phosphorylates PIK3R1, PLCG2, GRB2, SLA2 and CBL. Activation of PLCG2 leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate, that then lead to the activation of protein kinase C family members, especially PRKCD. Phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase, leads to activation of the AKT1 signaling pathway. Activated CSF1R also mediates activation of the MAP kinases MAPK1/ERK2 and/or MAPK3/ERK1, and of the SRC family kinases SRC, FYN and YES1. Activated CSF1R transmits signals both via proteins that directly interact with phosphorylated tyrosine residues in its intracellular domain, or via adapter proteins, such as GRB2. Promotes activation of STAT family members STAT3, STAT5A and/or STAT5B. Promotes tyrosine phosphorylation of SHC1 and INPP5D/SHIP-1. Receptor signaling is down-regulated by protein phosphatases, such as INPP5D/SHIP-1, that dephosphorylate the receptor and its downstream effectors, and by rapid internalization of the activated receptor. [UniProtKB/Swiss-Prot Function]

**Product images:**

Circular map for MG211364