

## Product datasheet for **MR225710**

### **Fgfr1 (NM\_001079909) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Fgfr1 (NM_001079909) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Fgfr1
Synonyms:	AW208770; bFGF-R-1; c-fgr; Eask; Fgfr-1; FGFR-I; FLG; Flt-2; Hspy; MFR
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**ORF Nucleotide Sequence:**

>MR225710 representing NM\_001079909  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGTGGGGCTGGAAGTGCCTCCTCTTCTGGGCTGTGCTGGTACACGCCACTCTCTGCACTGCCAGGCCAG  
 CCCAACCTTGCCGAACAAGATGCACTCCCATCCTCGGAAGATGATGACGACGACGATGACTCCTCCTC  
 GGAGGAGAAAGAGACGGACAACACCAAAACCAACCCCTGTAGCTCCCTACTGGACATCCCCAGAGAAAATG  
 GAGAAGAAACTGCATGCGGTGCCGCTGCCAAGACGGTGAAGTTCAAGTGCCCGTCGAGTGGGACACCCA  
 ACCCCACTCTGCGCTGGTTGAAAAATGGCAAAGAGTTTAAAGCCTGACCACCGAATTGGAGGCTACAAGGT  
 TCGCTATGCCACCTGGAGCATCATAATGGATTCTGTGGTGCCTTCTGACAAGGGCAACTACACCTGCATC  
 GTGGAGAATGAGTATGGGAGCATCAACCACACCTACCAGCTTGACGTCGTGGAACGATCTCCGACCCGAC  
 CCATCCTTCAGGCAGGGCTGCCTGCCAACAAGACAGTGGCCCTGGGCAGCAATGTGGAGTTCATGTGTAA  
 GGTGTACAGCGATCCGCAGCCTCACATTAGTGGCTGAAGCACATCGAGGTGAACGGGAGTAAGATCGGG  
 CCAGACAACCTTGCCGATGTCCAGATCCTGAAGACTGCTGGAGTTAATACCACCGACAAGGAAATGGAGG  
 TGCTTCATCTACGGAATGTCTCCTTTGAGGATGCGGGGGAGTATACGTGCTTGGCGGGTAACTCTATCGG  
 ACTCTCCCATCACTCTGCATGGTTGACCCTTCTGGAAGCCCTGGAAGAGAGACCAGCTGTGATGACCTCA  
 CCGCTCTACCTGGAGATCATTATCTACTGCACCGGGGCCCTTCTGATCTCCTGCATGTTGGGCTCTGTCA  
 TCATCTATAAGATGAAGAGCGGCACCAAGAAGAGCGACTTCCATAGCCAGATGGCTGTGCACAAGCTGGC  
 CAAGAGCATCCCTCTGCGCAGACAGGTAACAGTGTGAGTGCAGTCCAGTGCATCCATGAACCTCTGGGTT  
 CTCCTGGTTCGGCCCTCACGGCTCTCCTCCAGCGGGACCCCATGCTGGCTGGAGTCTCCGAATATGAGC  
 TCCCTGAGGATCCCCGCTGGGAGCTGCCACGAGACAGACTGGTCTTAGGCAAACCACTTGGCGAGGGCTG  
 CTCGGGCAGGTGGTGTGGCTGAGGCCATCGGGCTGGATAAAGGACAAACCAACCGTGTGACCAAAAGTG  
 GCCGTGAAGATGTTGAAGTCCGACGCAACGAGAGGACCTGTCGGATCTGATCTCGGAGATGGAGATGA  
 TGAAAATGATTGGGAAGCACAAGAATATCATCAACCTTCTGGGAGCGTGCACACAGGATGGTCTCTTTA  
 TGTCAATTGTGGAGTACGCCTCAAAGGCAATCTCCGGGAGTATCTACAGGCCCGGAGGCCTCCTGGGCTG  
 GAGTACTGCTATAACCCAGCCACAACCCGAGGAACAGCTGTCTTCAAAGATCTGGTATCCTGTGCCT  
 ATCAGGTGGCTCGGGCATGGAGTATCTTGCTCTAAGAAGTGTATACACCGAGACCTGGCTGCTAGGAA  
 CGTCTGGTGACCGAGGATAACGTAATGAAGATCGCAGACTTTGGCTTAGCTCGAGACATTCATCATATC  
 GACTACTACAAGAAAACCAACCGCCGGCTGCCTGTGAAGTGGATGGCCCTGAGGCGTTGTTTGACC  
 GGATCTACACACACCAGAGCGATGTGTGGTCTTTTGGAGTGTCTTGTGGGAGATCTTCACTCTGGTGG  
 CTCCCCATACCCCGTGTGCCTGTGGAGGAACTTTTCAAGCTGTGAAGGAGGGTTCATCGAATGGACAAG  
 CCCAGTAACTGTACCAATGAGCTGTACATGATGATGCGGGACTGTGGCATGCAGTGCCTCTCAGAGAC  
 CTACGTTCAAGCAGTTGGTGGAGACCTGGACCGATTGTGGCCTTGACCTCAAACAGGAGTATCTGGA  
 CCTGTCCATACCGCTGGACCACTACTCACCCAGCTTTCCCGACACACGGAGCTCCACCTGCTCCTCAGGG  
 GAGGACTCTGTCTTCTCATGAGCCGTTACCTGAGGAGCCCTGTCTGCCTCGACACCCACCCAGCTTG  
 CCAACAGTGGACTCAAACGGCGC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >MR225710 representing NM\_001079909  
 Red=Cloning site Green=Tags(s)

MWGWKCLLFWAVLVTATLCTARPAPTLPEQDALPSEDDDDDDSSSEKETDNTKPNVPVAPYWTSPEKM  
 EKKLHAVPAAKTVKFKCPSSTGPNPTLRWLKNGKEFKPDHRIGGYKVRYATWSIIMDSVVP SDKGN YTCI  
 VENEYGSINH TYQLDVVERSPHRPILQAGLPANKTVALGSNVEFMCKVYSDPQPHIQWLKHIEVNGSKIG  
 PDNLPYVQILKTAGVNTTDKEMEVLHLRNVSFEDAGEY TCLAGNSIGLSHHSAWLTVLEALEERP AVMTS  
 PLYLEII IYCTGAF LISCM LGSV I IYKMKSGTKK SDFHSQMAVHKLAKS I PLRRQVTVSADSSASMNSGV  
 LLVRPSRLSSSGTPMLAGVSEYELPEDPRWELPRDRLVLGKPLGEGCFGQVVLAEAIGLDKDKPNRVTKV  
 AVKMLKSDATEKDLSDLISEMEMMKMIGKHKNIINLLGACTQDGPLYVIVEYASKGNLREYLQARRPPGL  
 EYCYNPSHNPEEQ LSSKDLVSCAYQVARGMEYLASKKCIHRDLAARNVLVTE DNMVKIADFLARDIHHI  
 DYYKKTNGRLPVKWM APEALFDRIYTHQSDVVSFGVLLWEIFTLGGSPYPGVPVEELFKLLKEGHRMDK  
 PSNCTNELYMMMRDCWHAVPSQRPTFKQLVEDLDRIVALTSNQEYLDLSIPLDQYSPSPFDRSSTCSSG  
 EDSVFSHEPLPEEPCLPRHPTQLANGLKRR

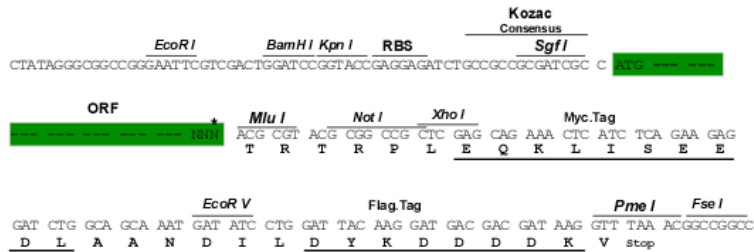
TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

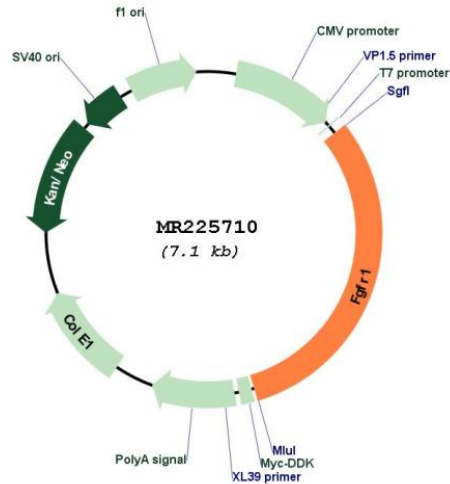
Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**Plasmid Map:**


**ACCN:** NM\_001079909

**ORF Size:** 2193 bp

**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](mailto: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\\_001079909.1](#), [NM\\_001079909.2](#), [NP\\_001073378.1](#)

**RefSeq Size:** 4741 bp

**RefSeq ORF:** 2202 bp

**Locus ID:** 14182

**UniProt ID:** [P16092](#)

**Cytogenetics:** 8 14.12 cM

**MW:** 82.7 kDa

**Gene Summary:** Tyrosine-protein kinase that acts as cell-surface receptor for fibroblast growth factors and plays an essential role in the regulation of embryonic development, cell proliferation, differentiation and migration. Required for normal mesoderm patterning and correct axial organization during embryonic development, normal skeletogenesis and normal development of the gonadotropin-releasing hormone (GnRH) neuronal system. Phosphorylates PLCG1, FRS2, GAB1 and SHB. Ligand binding leads to the activation of several signaling cascades. Activation of PLCG1 leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate. Phosphorylation of FRS2 triggers recruitment of GRB2, GAB1, PIK3R1 and SOS1, and mediates activation of RAS, MAPK1/ERK2, MAPK3/ERK1 and the MAP kinase signaling pathway, as well as of the AKT1 signaling pathway. Promotes phosphorylation of SHC1, STAT1 and PTPN11/SHP2. In the nucleus, enhances RPS6KA1 and CREB1 activity and contributes to the regulation of transcription. FGFR1 signaling is down-regulated by IL17RD/SEF, and by FGFR1 ubiquitination, internalization and degradation (By similarity).[UniProtKB/Swiss-Prot Function]