

Product datasheet for **RC403397**

FGFR1 (NM_023110) Human Mutant ORF Clone

Product data:

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| Product Type: | Mutant ORF Clones |
| Product Name: | FGFR1 (NM_023110) Human Mutant ORF Clone |
| Mutation Description: | R254Q |
| Affected Codon#: | 254 |
| Affected NT#: | 761 |
| Nucleotide Mutation: | FGFR1 Mutant (R254Q), Myc-DDK-tagged ORF clone of Homo sapiens fibroblast growth factor receptor 1 (FGFR1), transcript variant 1 as transfection-ready DNA |
| Effect: | Kallmann syndrome |
| Symbol: | FGFR1 |
| Synonyms: | bFGF-R-1; BFGFR; CD331; CEK; ECCL; FGFBR; FGFR-1; FLG; FLT-2; FLT2; HBGFR; HH2; HRTFDS; KAL2; N-SAM; OGD |
| E. coli Selection: | Kanamycin (25 ug/mL) |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-Entry (PS100001) |
| Tag: | Myc-DDK |
| ACCN: | NM_023110 |
| ORF Size: | 2466 bp |
| Restriction Sites: | Sgfl-Mlul |



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**ORF Nucleotide
Sequence:**

>RC403397 representing NM_023110
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGTGGAGCTGGAAGTGCCTCCTCTTCTGGGCTGTGCTGGTACAGCCACTCTGCACCCTAGGCCGT
 CCCCGACCTTGCCTGAACAAGCCAGCCCTGGGGAGCCCTGTGGAAGTGGAGTCTTCCCTGGTCCACCC
 CGGTGACCTGCTGCAGCTTCGCTGTGCGCTGCGGGACGATGTGCAGAGCATCAACTGGCTGCGGGACGGG
 GTGCAGCTGGCGGAAAGCAACCCGACCCGCATCACAGGGGAGGAGGTGGAGTGCAGGACTCCGTGCCCCG
 CAGACTCCGGCCTCTATGCTTGCCTAACAGCAGCCCTCGGGCAGTGACACCACCTACTTCTCCGTCAA
 TGTTTCAGATGCTCTCCCTCCTCGGAGGATGATGATGATGATGACTCCTCTTCAGAGGAGAAAAGAA
 ACAGATAACACCAACCAACCCGTATGCCCGTAGCTCCATATTGGACATCCCAGAAAAGATGAAAAGA
 AATTGCATGCAGTCCGGCTGCCAAGACAGTGAAGTTCAAATGCCCTTCCAGTGGGACCCCAACCCAC
 ACTGCGCTGGTTGAAAAATGGCAAAGAATTCAAACCTGACCACAGAATTGGAGGCTACAAGTCCGTTAT
 GCCACCTGGAGCATCATAATGGACTCTGTGGTGCCTCTGACAAGGGCAACTACACCTGCATTGTGGAGA
 ATGAGTACGGCAGCATCAACCACACATACCAGCTGGATGTGCTGGAGCGGTCCCTCACCAGCCCATCT
 GCAAGCAGGGTTGCCCGCAACAAAACAGTGGCCCTGGGTAGCAACGTGGAGTTCATGTGTAAGGTGTAC
 AGTGACCCGCAGCCGCACATCCAGTGGCTAAAGCACATCGAGGTGAATGGGAGCAAGATTGGCCAGACA
 ACCTGCCTTATGTCCAGATCTTGAAGACTGCTGGAGTTAATACCACCGACAAAGAGATGGAGGTGCTTCA
 CTTAAGAAATGTCTCCTTTGAGGACGCAGGGGAGTACGTGCTTGGCGGTAACCTATCGGACTCTCC
 CATCACTGTGCATGGTTGACCGTCTTGGAAAGCCCTGGAAGAGAGGCCGGCAGTGCATGCACCGCTCTA
 CAAGATGAAGAGTGGTACCAAGAAGAGTGACTTCCACAGCCAGATGGCTGTGACAAGCTGGCCAAGAGC
 ATCCCTCTGCGCAGACAGGTAACAGTGTCTGCTGACTCCAGTGCATCCATGAACCTCTGGGGTTCTCTGG
 TTCGGCCATCACGGCTCTCCTCCAGTGGGACTCCATGCTAGCAGGGGTCTCTGAGTATGAGCTTCCCGA
 AGACCCTCGTGGGAGCTGCCTCGGGACAGACTGGTCTTAGGCAAACCCCTGGGAGAGGGCTGCTTTGGG
 CAGGTGGTGTGGCAGAGGCTATCGGGCTGGACAAGGACAAACCAACCGTGTGACCAAAGTGGCTGTGA
 AGATGTTGAAGTCGGACGCAACAGAGAAAGACTTGTGACACTGATCTCAGAAATGGAGATGATGAAGT
 GATCGGGAAGCATAAGAATATCATCAACCTGCTGGGGGCTGCACGCAGGATGGTCCCTTGTATGTCATC
 GTGGAGTATGCCTCCAAGGGCAACCTGCGGGAGTACCTGCAGGCCCGGAGGCCCCAGGGCTGGAATACT
 GCTACAACCCAGCCACAACCCAGAGGAGCAGCTCTCCTCAAGGACCTGGTGTCTGCGCTACCAGGT
 GGCCCGAGGCATGGAGTATCTGGCTCCAAGAAGTGCATACACCGAGACCTGGCAGCCAGGAATGTCCTG
 GTGACAGAGGACAATGTGATGAAGATAGCAGACTTTGGCTCGCACGGGACATTCACCACATCGACTACT
 AAAAAAGACAACCAACGGCCGACTGCCTGTGAAGTGGATGGCACCCGAGGCATTATTTGACCGGATCTA
 CACCCACAGAGTGTGTGGTCTTTCGGGGTGTCTCTGTGGGAGATCTTCACTCTGGGCGGCTCCCCA
 TACCCCGGTGTGCTGTGGAGGAACCTTCAAGCTGTGAAGGAGGGTCAACCGCATGGACAAGCCAGTA
 ACTGCACCAACGAGCTGTACATGATGATGCGGGACTGCTGGCATGCAGTGCCTCACAGAGACCCACTT
 CAAGCAGCTGGTGAAGACCTGGACCGCATCGTGGCCTTGACCTCAACCAAGGAGTACCTGGACCTGTCC
 ATGCCCCGGACCACTACTCCCCAGCTTTCCCGACACCCGGAGCTTACGTGCTCTCAGGGGAGGATT
 CCGTCTTCTCTCATGAGCCGCTGCCCGAGGAGCCCTGCCTGCCCCGACACCCAGCCAGCTTGCCAAATGG
 CGGACTCAAACGCCGC

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGA TAAGGTTTAA

Protein Sequence: >RC403397 representing NM_023110
 Red=Cloning site Green=Tags(s)

MWSWKCLLFWAVLVTATLCTARPSPTLPEQAQPWVAPVEVESFLVHPGDLLQLRCRLRDDVQVINWLRDG
 VQLAESNRTRITGEEVEVQDVPADSGLYACVTSSPSGSDTTYFSVNVSDALPSEDDDDDDSSSEEKE
 TDNTKPNRMPVAPYWTSPKMEKHLHAVPAAKTVKFKCPSSGTPNPTLRWLKNGKEFKPDHRIGGYKVRY
 ATWSIIMDSVVPDSDKGNVYTCIVENEYGSINHTYQLDIVERSPHQPILQAGLPANKTVALGSNVFEMCKVY
 SDPQPHIQWLKHIEVNGSKIGPDLNLPYVQILKTAGVNTTDKEMEVLHLRNVSFEDAGEYTCLAGNSIGLS
 HHSAWLTVLEALEERPAVMTSPLYLEIIYCTGAFILSCMVGSVIVYKMKSGTKKSDFFHSQMAVHKLAKS
 IPLRRQVTVSADSSASMSGVLLVRPSRLSSSGTPMLAGVSEYELPEDPRWELPRDRLVLGKPLGEGCFG
 QVYLAELGLDKDKPNRVTKVAVKMLKSDATEKDLSDLISEMEMMKMIGKHKNIINLLGACTQDGPLYVI
 VEYASKGNLREYLQARRPPGLECYNPSHNPPEEQSSKDLVSCAYQVARGMEYLASKKCIHRDLAARNVL
 VTEDNVMKIADFLARDIHHIDYKKTNGRLPVKWMPEALFDRIYTHQSDVWSFGVLLWEIFTLGGSP
 YPGVPEELFKLLKEGHRMDKPSNCTNELYMMRDCWHAVPSQRPTFKQLVEDLDRIVALTSNQEYLDLS
 MPLDQYSPFPDTRSSTCSSGSDSVFSHEPLPEEPCLPRHPAQLANGGLKRR

SGPTRRRRLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:



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|--------------------------|--|
| OTI Disclaimer: | <p>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.</p> <p>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</p> |
| 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). |
| RefSeq: | NP_075598 |
| RefSeq Size: | 2466 bp |
| RefSeq ORF: | 2469 bp |
| Locus ID: | 2260 |
| Cytogenetics: | 8p11.23 |
| Domains: | ig, IGc2, IG |
| Protein Families: | Druggable Genome, Protein Kinase, Transmembrane |
| Protein Pathways: | Adherens junction, MAPK signaling pathway, Melanoma, Pathways in cancer, Prostate cancer, Regulation of actin cytoskeleton |
| MW: | 90.4 kDa |

Gene Summary:

The protein encoded by this gene is a member of the fibroblast growth factor receptor (FGFR) family, where amino acid sequence is highly conserved between members and throughout evolution. FGFR family members differ from one another in their ligand affinities and tissue distribution. A full-length representative protein consists of an extracellular region, composed of three immunoglobulin-like domains, a single hydrophobic membrane-spanning segment and a cytoplasmic tyrosine kinase domain. The extracellular portion of the protein interacts with fibroblast growth factors, setting in motion a cascade of downstream signals, ultimately influencing mitogenesis and differentiation. This particular family member binds both acidic and basic fibroblast growth factors and is involved in limb induction. Mutations in this gene have been associated with Pfeiffer syndrome, Jackson-Weiss syndrome, Antley-Bixler syndrome, osteoglophonic dysplasia, and autosomal dominant Kallmann syndrome 2. Chromosomal aberrations involving this gene are associated with stem cell myeloproliferative disorder and stem cell leukemia lymphoma syndrome. Alternatively spliced variants which encode different protein isoforms have been described; however, not all variants have been fully characterized. [provided by RefSeq, Jul 2008]