

## Product datasheet for **RC403413**

### FGFR1 (NM\_023110) Human Mutant ORF Clone

#### Product data:

Product Type:	Mutant ORF Clones
Product Name:	FGFR1 (NM_023110) Human Mutant ORF Clone
Mutation Description:	C381R
Affected Codon#:	381
Affected NT#:	1141
Nucleotide Mutation:	FGFR1 Mutant (C381R), Myc-DDK-tagged ORF clone of Homo sapiens fibroblast growth factor receptor 1 (FGFR1), transcript variant 1 as transfection-ready DNA
Effect:	Osteoglophonic dysplasia
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:

>RC403413 representing NM\_023110  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCCGGATCGCC

ATGTGGAGCTGGAAGTGCCTCCTCTTCTGGGCTGTGCTGGTACAGCCACTCTGCACCCTAGGCCGT  
CCCCGACCTTGCCTGAACAAGCCAGCCCTGGGGAGCCCTGTGGAAGTGGAGTCTTCCCTGGTCCACCC  
CGGTGACCTGCTGCAGCTTCGCTGTGCGCTGCGGGACGATGTGCAGAGCATCAACTGGCTGCGGGACGGG  
GTGCAGCTGGCGGAAAGCAACCCGACCCGCATCACAGGGGAGGAGGTGGAGGTGCAGGACTCCGTGCCCCG  
CAGACTCCGGCCTCTATGCTTGCCTAACAGCAGCCCTCGGGCAGTGACACCACCTACTTCTCCGTCAA  
TGTTTTCAGATGCTCTCCCTCCTCGGAGGATGATGATGATGATGACTCCTCTTCAGAGGAGAAAAGAA  
ACAGATAACACCAACCAACCCGTATGCCCGTAGCTCCATATTGGACATCCCAGAAAAGATGAAAAGA  
AATTGCATGCAGTCCGGCTGCAAGACAGTGAAGTTCAAATGCCCTTCCAGTGGGACCCCAACCCAC  
ACTGCGCTGGTTGAAAAATGGCAAAGAATTCAAACCTGACCACAGAATTGGAGGTACAAGGTCCGTTAT  
GCCACCTGGAGCATCATAATGGACTCTGTGGTGCCTCTGACAAGGGCAACTACACCTGCATTGTGGAGA  
ATGAGTACGGCAGCATCAACCACACATACCAGCTGGATGTGCTGGAGCGGTCCCTCACCGGCCATCCT  
GCAAGCAGGGTTGCCCGCAACAAAACAGTGGCCCTGGGTAGCAACGTGGAGTTCATGTGTAAGGTGTAC  
AGTGACCCGCAGCCGCACATCCAGTGGCTAAAGCACATCGAGGTGAATGGGAGCAAGATTGGCCAGACA  
ACCTGCCTTATGTCCAGATCTTGAAGACTGCTGGAGTTAATACCACCGACAAAGAGATGGAGGTGCTTCA  
CTTAAGAAATGTCTCTTTGAGGACGCAGGGGAGTACGTGCTTGGCGGTAACCTATCGGACTCTCC  
CATCACTGTCATGGTTGACCGTCTGGAAGCCCTGGAAGAGAGGCCGGCAGTGATGACCTCGCCCTGT  
ACCTGGAGATCATCATCTATCGCACAGGGGCTTCCCTCATCTCCTGCATGGTGGGGTCCGTACGTCTA  
CAAGATGAAGAGTGGTACCAAGAAGAGTGACTTCCACAGCCAGATGGCTGTGACAAGCTGGCCAAGAGC  
ATCCCTCTGCGCAGACAGGTAACAGTGTCTGCTGACTCCAGTGCATCCATGAACCTCTGGGGTTCTCTGG  
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AGACCCTCGTGGGAGCTGCCTCGGGACAGACTGGTCTTAGGCAAACCCCTGGGAGAGGGCTGCTTTGGG  
CAGGTGGTGTGGCAGAGGCTATCGGGCTGGACAAGGACAAACCAACCGTGTGACCAAAGTGGCTGTGA  
AGATGTTGAAGTCGGACGCAACAGAGAAAGACTTGTGACACTGATCTCAGAAATGGAGATGATGAAGT  
GATCGGAAGCATAAGAATATCATCAACCTGCTGGGGGCTGCACGCAGGATGGTCCCTTGTATGTCATC  
GTGGAGTATGCCTCAAGGGCAACCTGCGGGAGTACCTGCAGGCCGGAGGCCCCAGGGCTGGAATACT  
GCTACAACCCAGCCACAACCCAGAGGAGCAGCTCTCCTCAAGGACCTGGTGTCTGCGCTACCAGGT  
GGCCCGAGGCATGGAGTATCTGGCTCCAAGAAGTGCATACACCGAGACCTGGCAGCCAGGAATGTCCTG  
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ATAAAAAGACAACCAACGGCCGACTGCCTGTGAAGTGGATGGCACCCGAGGCATTATTTGACCGGATCTA  
CACCCACCAGAGTGTGTGGTCTTTCGGGGTGTCTCTGTGGGAGATCTTCACTCTGGGCGGCTCCCCA  
TACCCCGGTGTGCTGTGGAGGAACCTTCAAGCTGCTGAAGGAGGGTCAACGCATGGACAAGCCAGTA  
ACTGCACCAACGAGCTGTACATGATGATGCGGGACTGCTGGCATGCAGTGCCTCACAGAGACCCACCTT  
CAAGCAGCTGGTGAAGACCTGGACCGCATCGTGGCCTTGACCTCAACCAAGGAGTACCTGGACCTGTCC  
ATGCCCCGGACCACTACTCCCCAGCTTTCCCGACACCCGGAGCTTACGTGCTCTCAGGGGAGGATT  
CCGTCTTCTCTCATGAGCCGCTGCCCGAGGAGCCCTGCCTGCCCGACACCCAGCCAGCTTGCCAAATGG  
CGGACTCAAACGCCGC

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
TGGATTACAAGGATGACGACGA TAAGGTTTAA

**Protein Sequence:** >RC403413 representing NM\_023110  
 Red=Cloning site Green=Tags(s)

MWSWKCLLFWAVLVTATLCTARPSPTLPEQAQPWVAPVEVESFLVHPGDLLQLRCRLRDDVQVINWLRDG  
 VQLAESNRTRITGEEVEVQDVPADSGLYACVTSSPSGSDTTYFSVNVSDALPSEDDDDDDSSSEEKE  
 TDNTKPNRMPVAPYWTSPKMEKHLHAVPAAKTVKFKCPSSGTPNPTLRWLKNGKEFKPDHRIGGYKVRY  
 ATWSIIMDSVVPDSDKGNVYTCIVENEYGSINHTYQLDIVERSPHRPILQAGLPANKTVALGSNVFEMCKVY  
 SDPQPHIQWLKHIEVNGSKIGPDNLPPYQILKTAGVNTTDKEMEVLHLRNVSFEDAGEYTCLAGNSIGLS  
 HHSAWLTVLEALEERPAVMTSPLYLEIIYRTGAFILSCMVGSVIVYKMKSGTKKSDFFHSQMAVHKLAKS  
 IPLRRQVTVSADSSASMSGVLLVRPSRLSSSGTPMLAGVSEYELPEDPRWELPRDRLVLGKPLGEGCFG  
 QVYLAELIQLDKDKPNRVTKVAVKMLKSDATEKDLSDLISEMEMMKMIGKHKNIINLLGACTQDGPLYVI  
 VEYASKGNLREYLQARRPPGLECYNPSHNPPEEQSSKDLVSCAYQVARGMEYLASKKCIHRDLAARNVL  
 VTEDNVMKIADFLARDIHHIDYKKTTNGRLPVKWMPEALFDRIYTHQSDVWSFGVLLWEIFTLGGSP  
 YPGVPVEELFKLLKEGHRMDKPSNCTNELYMMRDCWHAVPSQRPTFKQLVEDLDRIVALTSNQEYLDLS  
 MPLDQYSPFPDTRSSTCSSGSDSVFSHEPLPEEPCLPRHPAQLANGGLKRR

SGPTRRRRLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



<b>OTI Disclaimer:</b>	<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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> 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. <a href="#">More info</a></p>
<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>RefSeq:</b>	<a href="#">NP_075598</a>
<b>RefSeq Size:</b>	2466 bp
<b>RefSeq ORF:</b>	2469 bp
<b>Locus ID:</b>	2260
<b>Cytogenetics:</b>	8p11.23
<b>Domains:</b>	ig, IGc2, IG
<b>Protein Families:</b>	Druggable Genome, Protein Kinase, Transmembrane
<b>Protein Pathways:</b>	Adherens junction, MAPK signaling pathway, Melanoma, Pathways in cancer, Prostate cancer, Regulation of actin cytoskeleton
<b>MW:</b>	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]