

Product datasheet for **SC323640**

FGFR2 (NM_000141) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	FGFR2 (NM_000141) Human Untagged Clone
Tag:	Tag Free
Symbol:	FGFR2
Synonyms:	BBDS; BEK; BFR-1; CD332; CEK3; CFD1; ECT1; JWS; K-SAM; KGFR; TK14; TK25
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >NCBI ORF sequence for NM_000141, the custom clone sequence may differ by one or more nucleotides

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ATGGTCAGCTGGGGTCGTTTCATCTGCCTGGTCGTCGGTCACCATGGCAACCTTGTCCCTGGCCCGGCCCT
CCTTCAGTTTAGTTGAGGATACCACATTAGAGCCAGAAGAGCCACCAACCAATACCAAATCTCTCAACC
AGAAGTGTACGTGGCTGCGCCAGGGGAGTCGCTAGAGGTGCGCTGCCTGTTGAAAGATGCCGCCGTGATC
AGTTGGACTAAGGATGGGGTGCCTTGGGGCCCAACAATAGGACAGTGCTTATTGGGGAGTACTTGACAGA
TAAAGGGCGCCACGCCTAGAGACTCCGGCCTCTATGCTTGTACTGCCAGTAGGACTGTAGACAGTAAAC
TTGGTACTTCATGGTGAATGTCACAGATGCCATCTCATCCGGAGATGATGAGGATGACACCGATGGTGCG
GAAGATTTTGTCAGTGAGAACAGTAACAACAAGAGAGCACCATACTGGACCAACACAGAAAAGATGGAAA
AGCGGCTCCATGCTGTGCCTGCGGCCAACACTGTCAAGTTTCGCTGCCAGCCGGGGGAACCAATGCC
AACCATGCGGTGGCTGAAAAACGGGAAGGAGTTTAAAGCAGGAGCATCGCATTGGAGGCTACAAGGTACGA
AACCCAGCACTGGAGCCTCATTATGGAAAGTGTGGTCCCATCTGACAAGGGAAATTATACCTGTGTAGTGG
AGAATGAATACGGGTCCATCAATCACACGTACCACCTGGATGTTGTGGAGCGATCGCCTCACCGGCCAT
CCTCCAAGCCGGACTGCCGGCAAATGCCTCCACAGTGGTCGGAGGAGACGTAGAGTTTGTCTGCAAGGTT
TACAGTGTGCCAGCCCAATCCAGTGGATCAAGCACGTGGAAAAGAACGGCAGTAAATACGGGCCCCG
ACGGGCTGCCCTACCTCAAGTTCTCAAGGCCCGCGGTGTTAACACCACGGACAAAGAGATTGAGTTCT
CTATATTCGGAATGTAACTTTGGAGACGCTGGGGAATACGTGCTTGGCGGTAATTCTATTGGGATA
TCCTTTCCTCTGCATGGTTGACAGTTCTGCCAGCGCCTGGAAGAGAAAAGGAGATTACAGCTTCCCCAG
ACTACCTGGAGATAGCCATTTACTGCATAGGGGTCTTCTTAATCGCCTGTATGGTGGTAACAGTCATCCT
GTGCCGAATGAAGAACACGACCAAGAAGCCAGACTTCAGCAGCCAGCCGGCTGTGCACAAGTACACAAA
CGTATCCCCCTGCGGAGACAGGTAACAGTTTCGGCTGAGTCCAGCTCCTCCATGAACTCCAACACCCCGC
TGGTGAGGATAACAACACGCCTCTCTTCAACGGCAGACACCCCATGCTGGCAGGGGTCTCCGAGTATGA
ACTTCCAGAGGACCCAAAATGGGAGTTTCCAAGAGATAAGCTGACACTGGGCAAGCCCTGGGAGAAGGT
TGCTTTGGCAAGTGGTATGGCGGAAGCAGTGGGAATTGACAAAGACAAGCCCAAGGAGCGGTACCCG
TGGCCGTGAAGATGTTGAAAGATGATGCCACAGAGAAAGACCTTCTGATCTGGTGTGAGAGATGGAGAT
GATGAAGATGATTGGGAAACACAAGAATATCATAAATCTTCTGGAGCCTGCACACAGGATGGGCCTCTC
TATGTCATAGTTGAGTATGCCTCTAAAGGCAACCTCCGAGAATACCTCCGAGCCCGGAGGCCACCCGGGA
TGGAGTACTCCTATGACATTAACCGTGTCTCTGAGGAGCAGATGACCTTCAAGGACTTGGTGTATGCAC
CTACCAGCTGGCCAGAGGCATGGAGTACTTGGCTTCCAAAAATGTATTCATCGAGATTTAGCAGCCAGA
AATGTTTTGGTAACAGAAAACAATGTGATGAAAATAGCAGACTTTGGACTCGCCAGAGATATCAACAATA
TAGACTATTACAAAAGACCACCAATGGGCGGCTTCCAGTCAAGTGGATGGCTCCAGAAGCCCTGTTTGA
TAGAGTATACACTCATCAGAGTGTCTGGTCCCTCGGGGTGTTAATGTGGGAGATCTTCACTTTAGGG
GGCTCGCCCTACCCAGGGATTCCCGTGGAGGAACTTTTAAGCTGCTGAAGGAAGGACACAGAATGGATA
AGCCAGCAACTGCACCAACGAAGTGTACATGATGATGAGGGACTGTTGGCATGCAGTGCCTCCAGAG
ACCAACGTTCAAGCAGTTGGTAGAAGACTTGGATCGAATTCTCACTCTCACACCAATGAGGAATACTTG
GACCTCAGCCAACCTCTCGAACAGTATTCACCTAGTTACCCTGACACAAGAAGTTCTTGTCTTCAGGAG
ATGATTCTGTTTTTCTCCAGACCCCATGCCTTACGAACCATGCCTTCTCAGTATCCACACATAAACGG
CAGTGTTAAAACATGA
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5' Read Nucleotide Sequence:

>OriGene 5' read for mutant NM_000141 unedited
 ACGCCC GTT GAGCAATGGGCGGTAGGCGTGTACGGAGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGAA
 CCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGAATTCGGCACGAGGCAAAGCTCGGGCGC
 CGCGGGGCTGCATGCGGCGTACCTGGCCCGGCCGCGGACTGCTCTCCGGGCTGGCGGGGGCCGGCCGCG
 AGCCCCGGGGGCCCCGAGGCCGAGCTTGCCCTGCGCGCTCTGAGCCTTCGCAACTCGCGAGCAAAGTTTG
 GTGGAGGGCAACGCCAAAGCCTGAGTCCCTTTCTCTCTTCGTTCCCAATTCGAGGGCAAGCCCCCG
 GGGGCGTTCATGCCCGCGCTTCTCCGACGCCCTGGGGTACCCGTGAACCCCGGAGGGCTGGGCCCGC
 GCAAAAACCCAGGACCCCTTTTCTGCTTTTGGGAGTTGTTCCCCAAACCCCGGGGCTTCGTCGCTTT
 TTCCTTTCCCAAACCCACGCGGGGGCCGGGGGACAAACCACATTTCCCAAACCTTTTCCCTTTAATG
 TGAATGGAAGGGGAGCCCTTGGTTTCTGGACCCCGAGGGGTAAGGGGTTTGGCGCATATC
 CTACCCCATAAAAAGTGCCAAAAGGGTAAAAACCCCTTGGAAATGGGAAAAAGCCGGGGATTG
 GACCAACCCCGGGGCCGGGGGGCTTTTCTTCCCGGGCGGGGGCCACGGGGAACCTTTTTTGTG
 GCGGCGCCTTTTCTTTTTTTTTGGGGTACCCTTTTAGCCAAAGGGGGCCCCCTGGCGCCACCCA
 AAAAGAGAGAGCGGCGCCTTCTGTGGCGGCGCGCACACAGTGAAGTATTATTTCCCCCCCCGGGG
 GGAGACACAATGCCACACAATCGTGGGCTGTATAAGGAAGGGATTATCTCGAGCACTCCATCTCTAG
 TGCTTATGACGAACCACCTGCGAGCGCATCATCTGAATGAGTGTAGGTCTGCTGCCATCACAGCGAAGT
 AT

Kinase Domain Sequence:

>SC323640 kinase domain raw sequence. By performing [BLASTX](#) analysis with this sequence against NCBI reference protein database, you can confirm the presence of the kinase-deficient mutation
 GGTGCTTGGGCAGTGGTCTGGCGGAGCAGTGGGAATTGACAAAGACAAGCCCAAGGAGGCGGTCACCGTG
 GCCGTGATGATGTTGAAAGATGATGCCACAGAGAAAGACCTTTCTGATCTGGTGTGAGAGATGGAGATGA
 TGAAGATGATTGGAAACACAAGAATATCATAAATCTTCTTGGAGCCTGCACACAGGATGGGCTCTCTA
 TGTCTAGTTGAGTATGCCTCTAAAGGCAACCTCCGAGAATACCT

Restriction Sites:

Please inquire

ACCN:

NM_000141

Insert Size:

3890 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 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 kinase-deficient mutant clone was generated by created by site-directed mutagenesis from the corresponding wild-type clone. See details in "Application of active and kinase-deficient kinome collection for identification of kinases regulating hedgehog signaling." [Cell](#), 2008 May p536-548.

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:	<ol style="list-style-type: none">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:	<u>NM_000141.2</u> , <u>NP_000132.1</u>
RefSeq Size:	4654 bp
RefSeq ORF:	2466 bp
Locus ID:	2263
UniProt ID:	<u>P21802</u>
Cytogenetics:	10q26.13
Domains:	pkinase, TyrKc, S_TKc, ig, IGc2, IG
Protein Families:	Druggable Genome, Protein Kinase, Secreted Protein, Transmembrane
Protein Pathways:	Endocytosis, MAPK signaling pathway, Pathways in cancer, Prostate cancer, Regulation of actin cytoskeleton

Gene Summary:

The protein encoded by this gene is a member of the fibroblast growth factor receptor 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 is a high-affinity receptor for acidic, basic and/or keratinocyte growth factor, depending on the isoform. Mutations in this gene are associated with Crouzon syndrome, Pfeiffer syndrome, Craniosynostosis, Apert syndrome, Jackson-Weiss syndrome, Beare-Stevenson cutis gyrata syndrome, Saethre-Chotzen syndrome, and syndromic craniosynostosis. Multiple alternatively spliced transcript variants encoding different isoforms have been noted for this gene. [provided by RefSeq, Jan 2009]

Transcript Variant: This variant (1) encodes isoform 1, also referred to as isoform BEK and K-sam. **Sequence Note:** A downstream AUG translation start codon is selected for this RefSeq based on the presence of a strong Kozak consensus signal, a strong community standard for the use of the downstream start codon, and on a higher probability of an N-terminal signal peptide being present in the resulting protein. The use of an alternative in-frame upstream AUG start codon would result in a protein that is 19 aa longer at the N-terminus. Translation from the annotated downstream start codon is likely to occur via leaky scanning and/or reinitiation. **CCDS Note:** A downstream AUG translation start codon is selected for this CCDS representation based on a strong community standard for its use, and on a higher probability of a signal peptide being present in the protein N-terminus. The use of an alternative upstream AUG start codon would result in a protein that is 19 aa longer at the N-terminus. The upstream AUG has a weak Kozak signal while the downstream AUG has a strong Kozak signal. Due to leaky scanning by ribosomes, it is possible that some ribosomes may initiate translation from the downstream AUG codon while others start from the upstream AUG. The presence of multiple upstream ORFs suggests that a combination of leaky scanning and translational reinitiation may be necessary to achieve translation of the annotated ORF.