

## Product datasheet for **RC402755**

### **ROR2 (NM\_004560) Human Mutant ORF Clone**

#### **Product data:**

Product Type:	Mutant ORF Clones
Product Name:	ROR2 (NM_004560) Human Mutant ORF Clone
Mutation Description:	W749X
Affected Codon#:	749
Affected NT#:	2246
Nucleotide Mutation:	ROR2 Mutant (W749X), Myc-DDK-tagged ORF clone of Homo sapiens receptor tyrosine kinase-like orphan receptor 2 (ROR2) as transfection-ready DNA
Effect:	Brachydactyly, type B
Symbol:	ROR2
Synonyms:	BDB; BDB1; NTRKR2
E. coli Selection:	Kanamycin (25 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_004560
ORF Size:	2244 bp
Restriction Sites:	Sgfi-MluI



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ORF Nucleotide  
Sequence:

>RC402755 representing NM\_004560  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCCCGGGGCTCGGCCTCCCGGGCGGCCGCTGTGTGCATCCCGGCCGTCTGGCGGCCGCCGCGC  
TTCTGCTCTCAGTGTCCCGACTTCAGGTGAAGTGGAGGTTCTGGATCCGAACGACCCTTTAGGACCCCT  
TGATGGCAGGACGGCCGATTCCAACCTCTGAAAGTTACTTTCTGAATTTCTGGAGCCAGTAAACAAT  
ATCACCATTGTCCAAGGCCAGACGGCAATTCTGCACTGCAAGGTGGCAGGAAACCCACCCCTAACGTGC  
GGTGGCTAAAGAATGATGCCCGGTGGTGCAGGAGCCGCGGGGATCATCATCCGGAAGACAGAATATGG  
TTCAGACTGCGAATCCAGGACTGGACACGACAGACTGGCTACTACCAGTGCCTGGCCACCAACGGG  
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TTCAGGATGATTACCACGAGGATGGGTTCTGCCAGCCTTACCGGGGAATTGCCTGTGCACGCTTCATTGG  
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ACCATGATCGGCACGTCTACGCACCTGTCCGACCAGTGTCTACAGTTCGCCATCCCATCCTTCTGCCACT  
TCGTGTTTCTCTGTGCGACGCGCGCTCCCGGACACCAAGCCGCGTGAGCTGTGCCGCGACGAGTGCGA  
GGTGTGGAGAGCGACCTGTGCCGCCAGGAGTACACCATCGCCCGCTCCAACCCGCTCATCCTCATGCGG  
CTTCAGCTGCCAAGTGTGAGGCGCTGCCCATGCCTGAGAGCCCCGACGCTGCCAACTGCATGCGCATTG  
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GGCAAGCACCACCAAGTCAAGCCACAGTGCAGCCGTGGGCCCTGCAGCACCCACAGCCACCACTG  
TCCAGCACAGACTTCCCTGAGCTTGGAGGGGGCAGCCTACTGCCGGAACCCCGGAGGCCAGATGGAGG  
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AGACAGCAGCAAGATGGGATTCTGTACATCTTGGTCCCAGCATCGCAATTCCAAGTGGTATCGCTTGC  
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AGGGGCCCTGCGGGAGGAGTTCGGCATGAGGCTATGCTGCGAGCACGGCTGCAACACCCCAACGTCGT  
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AGTCCGCCCTGGAGCCCCGACTTCGTGCACCTTGTGGCACAGATCGCGGCGGGGATGGAGTACCTATC  
CAGCCACCACGTGGTTACAAGGACCTGGCCACCCGCAATGTGCTAGTGTACGACAAGCTGAACGTGAAG  
ATCTCAGACTTGGCCTCTTCCGAGAGGTGTATGCCCGCATTACTACAAGCTGCTGGGAACTCGCTGC  
TGCCTATCCGCTGGATGGCCCCAGAGGCCATCATGTACGGCAAGTTCTCCATCGACTCAGACATCTGGTC  
CTACGGTGTGGTCTGTGGGAGGCTTTCAGCTACGGCTGCAGCCCTACTGCGGGTACTCCAACCAGGAT  
GTGGTGGAGATGATCCGGAACCGGCAGGTGTGCCTTGCCCCGATGACTGTCCCCTGGGTGTATGCC  
TCATGATCGAGTGTGGAACGAGTTCACAGCCGGCGGCCCGCTTCAAGGACATCCACAGCCGGCTCCG  
AGCC

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
TGGATTACAAGGATGACGACGA TAAGGTTTAA

**Protein Sequence:** >RC402755 representing NM\_004560  
 Red=Cloning site Green=Tags(s)

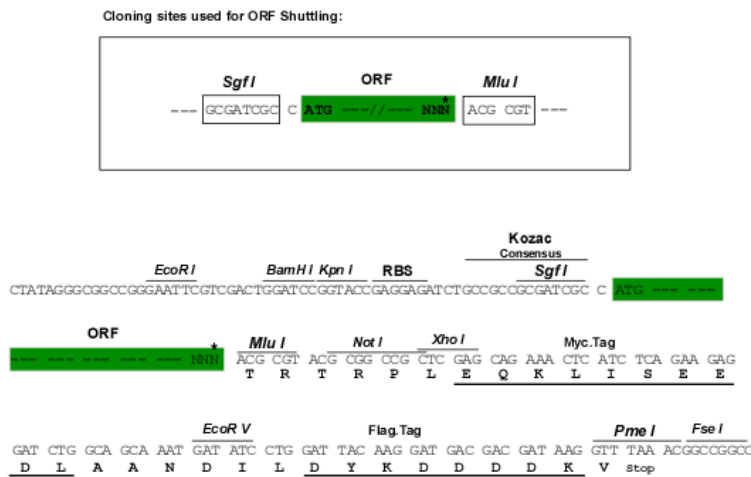
MARGSALPRRPLLCPAVWAAAALLLSVSRTSGEVEVLDPNPLGGLDGGDGP IPTLKGYFLNFLEPVNN  
 ITIVQGQTALHCKVAGNPPPNVRWLKNDAPVVQEPRIIRKTEYGSRLRIQDLDTDTGYQC VATNG  
 MKTITATGVL FVRLGPTHSPNHFQDDYHEDGFCQPYRGIACARFIGNRTIYVDSLQMQGEIENRITAAF  
 TMIGTSTHLSQCSQFAIPSFCHFVFP LCDARSRTPKPRELCRDECEVLES DLCRQEYTIARSNPLILMR  
 LQLPKCEALPMPESPDAANCMRIGIPAERLGRYHQCYNGSGMDYRGTASTTKSGHQCPWALQHPHSHHL  
 SSTDFPELGGGHAYCRNPGGQMEGPWCFTQNKNVRMELCDVPSCSPRDSKMGILYILVPSIAIPLVIAC  
 LFFLVCMCRNKQKASASTPQRRQLMASPSQDMEMPLINQHKQAKLKEISLSAVRFMEELGEDRFKGVYK  
 HLFGPAPGEQTQAVAIKTLKDKAEGPLREEFRHEAMLRARLQHPNVVCLLGVVTKDQPLSMIFSYCSHGD  
 LHEFLVMRSPHSDVGSTDDRTVKSALPEPFDVHLVAQIAAGMEYLSSHVVHKDLATRNVLVYDKLVNK  
 ISDLGLFREYYAADYYKLLGNSLLPIRWMAPAIMYGKFSIDSDIWSYGVVLEWVFSYGLQPYCYGYSNQD  
 VVEMIRNRQVLPDPCPAWVYALMIECWNEFPSRRRPRFKDIHSRLRA

SGPTRRRRLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



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

**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).

**RefSeq:** [NP\\_004551](#)

**RefSeq Size:** 2244 bp

**RefSeq ORF:** 2832 bp

**Locus ID:** 4920

**Cytogenetics:** 9q22.31

**Protein Families:** Druggable Genome, Protein Kinase, Transmembrane

**MW:** 82.3 kDa

**Gene Summary:** The protein encoded by this gene is a receptor protein tyrosine kinase and type I transmembrane protein that belongs to the ROR subfamily of cell surface receptors. The protein may be involved in the early formation of the chondrocytes and may be required for cartilage and growth plate development. Mutations in this gene can cause brachydactyly type B, a skeletal disorder characterized by hypoplasia/aplasia of distal phalanges and nails. In addition, mutations in this gene can cause the autosomal recessive form of Robinow syndrome, which is characterized by skeletal dysplasia with generalized limb bone shortening, segmental defects of the spine, brachydactyly, and a dysmorphic facial appearance. [provided by RefSeq, Jul 2008]