

## Product datasheet for **RC402752**

### **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:	N620K
Affected Codon#:	620
Affected NT#:	1860
Nucleotide Mutation:	ROR2 Mutant (N620K), Myc-DDK-tagged ORF clone of Homo sapiens receptor tyrosine kinase-like orphan receptor 2 (ROR2) as transfection-ready DNA
Effect:	Robinow syndrome, autosomal recessive
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:	2829 bp
Restriction Sites:	Sgfl-Mlul



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**ORF Nucleotide Sequence:**

>RC402752 representing NM\_004560  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCCCGGGCTCGGCGTCCCAGCGCGCGCTGCTGTGCATCCCGGCGCTCTGGGCGGCCCGCGC  
 TTCTGCTCTCAGTGTCCCGACTTCAGGTGAAGTGGAGTTCTGGATCCGAACGACCCTTTAGGACCCCT  
 TGATGGGCAGGACGGCCGATTCCAACCTCTGAAAGTTACTTTCTGAATTTCTGGAGCCAGTAAACAAT  
 ATCACCATTGTCCAAGGCCAGACGGCAATTCTGCACTGCAAGGTGGCAGGAAACCCACCCCTAACGTGC  
 GGTGGCTAAAGAATGATGCCCGGTGGTGCAGGAGCCGCGCGGATCATCATCCGGAAGACAGAATATGG  
 TTCAGACTGCGAATCCAGGACCTGGACACGACAGACTGGCTACTACCAGTGCCTGGCCACCAACGGG  
 ATGAAGACCATTACCGCACTGGCGTCTGTTTGTGCGGTGGTCCAACGCACAGCCAAATCATAACT  
 TTCAGGATGATTACCACGAGGATGGTCTGCCAGCCTTACCGGGGAATTGCCTGTGCACGCTTCATTGG  
 CAACCGGACCATTATGTGGACTCGCTTACAGTGCAGGGGAGATTGAAAACCGAATCACAGCGGCCTTC  
 ACCATGATCGGCACGTCTACGCACCTGTCCGACCAGTGTCTCACAGTTCGCCATCCCATCCTTCTGCCACT  
 TCGTGTTCCTCTGTGCGACGCGCTCCCAGCACCCAAAGCCGCGTGAGCTGTGCCGCGACGAGTGCGA  
 GGTGCTGGAGAGCGACCTGTGCCCGCAGGAGTACACCATCGCCCGCTCCAACCCGCTCATCTCATGCGG  
 CTTTACGCTGCCAAGTGTGAGGCGCTGCCATGCCTGAGAGCCCCGACGCTGCCAAGTGCATGCGCATTG  
 GCATCCCAGCCGAGAGGCTGGGCGCTACCATCAGTGTATAACGGCTCAGGCATGGATTACAGAGGAAC  
 GGCAAGCACCACCAAGTCAAGCCAGTGCAGCCGTTGGGCCCTGCAGCACCCACAGCCACCACTG  
 TCCAGCACAGACTTCCCTGAGCTTGGAGGGGGCACGCCACTGCCGGAACCCCGAGGCCAGATGGAGG  
 GCCCTGGTGTCTTACGCAGAATAAAAACGTACGCATGGAAGTGTGTGACGTACCTCGTGTAGTCCCGG  
 AGACAGCAGCAAGATGGGGATTCTGTACATCTTGGTCCCCAGCATCGCAATTCCTACTGGTATCGCTTGC  
 CTTTTCTTCTGTTTGCATGTGCCGGAATAAGCAGAAGGCATCTGCGTCCACACCGCAGCGCGCAGC  
 TGATGGCCTCGCCAGCCAAGACATGGAATGCCCTCATTAAACCAGCACAAACAGGCCAAACTCAAAGA  
 GATCAGCCTGTCTGCGGTGAGGTTTATGGAGGAGCTGGGAGAGGACCGGTTTGGGAAAGTCTACAAAGT  
 CACCTGTTCGGCCCTGCCCGGGGAGCAGACCCAGGCTGTGGCCATCAAACGCTGAAGGACAAAGCGG  
 AGGGGCCCTGCGGGAGGAGTCCGGCATGAGGCTATGCTGCGAGCACGGCTGCAACACCCCAACGTCGT  
 CTGCTGTGGGCGTGGTGACCAAGGACCAGCCCTGAGCATGATCTTACGCTACTGTTCCGACGGCGAC  
 CTCACGAATTCCTGGTATGCGCTCGCCGCACTCGGACGTGGGCAGCACCGATGATGACCGCACGGTGA  
 AGTCCGCCTGGAGCCCCGACTTCGTGCACCTTGTGGCACAGATCGCGCGGGGATGGAGTACCTATC  
 CAGCCACCACGTGGTTCAAGGACCTGGCCACCCGAAAGTGTAGTGTACGACAAGCTGAACGTGAAG  
 ATCTCAGACTTGGGCTCTTCCGAGAGGTGATGCCCGCGATTACTACAAGCTGTGGGAACTCGCTGC  
 TGCCATACCGCTGGATGGCCCCAGAGGCCATCATGTACGGCAAGTTCTCCATCGACTCAGACATCTGGTC  
 CTACGGTGTGGTCTGTGGGAGGCTTTCAGTACGGCTGCAGCCCTACTGCGGGTACTCCAACCAAGGAT  
 GTGGTGGAGATGATCCGGAACCGGACGGTGTGCCTTGCCTGATGACTGTCCCGCTGGGTGTATGCC  
 TCATGATCGAGTGTGGAACGAGTTCACAGCCGGCGGCCCGCTTCAAGGACATCCACAGCCGGCTCCG  
 AGCCTGGGGCAACCTTTCCAACATAACAGCTCGGCGCAGACTCGGGGGCCAGCAACACCACGACAGCC  
 AGCTCCCTGAGCACCCAGCCAGTGAAGCAATGTGAGCAACGCCCGCTACGTGGGGCCCAAGCAGAAGGCC  
 CGCCCTCCACAGCCCAAGTTCATCCCATGAAGGGCCAGATCAGACCCATGGTCCCCCGCCGACGT  
 CTACGTCCCCGTCAACGGCTACCAGCCGGTCCCGCCTATGGGGCTACCTGCCAACTTCTACCCGGTG  
 CAGATCCCAATGCAGATGGCCCCGACGAGGTGCCTCCTCAGATGGTCCCCAAGCCAGCTCACACCACA  
 GTGGCAGTGGCTCCACCAGCACAGGCTACGTACCACGGCCCCCTCAACACATCCATGGCAGACAGGGC  
 AGCCCTGCTCTCAGAGGGCGTGTGACACACAGAACGCCCCAGAAGATGGGGCCAGAGCACCGTGCAG  
 GAAGCAGAGGAGGAGGAAGGCTCTGTCCAGAGACTGAGCTGCTGGGGACTGTGACACTCTGCAGG  
 TGGACGAGGCCAAGTCCAGCTGGAAGCT

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
 TGGATTACAAGGATGACGACGA TAAGTTTAA

**Protein Sequence:** >RC402752 representing NM\_004560  
 Red=Cloning site Green=Tags(s)

MARGSALPRRPLLCIPAVWAAAALLLSVSRTSGEVEVLDPNDPLGPLDGQDGIPTLKGYFLNFLEPVNN  
 ITIVQGQTAILHCKVAGNPPPNVRWLKNDAPVVQEPRRIIRKTEYGSRLRIQDLDTTDTGYQCVAATNG  
 MKTITATGVLVFRLLGPHSPNHNFDQDYHEDGFCQPYRGIACARFIGNRTIYVDSLQMQGEIENRITAAF  
 TMIIGTSTHLSQCSQFAIPSFCHFVPLCDARSRTPKPRELCRDECEVLESIDLCRQEYTIARSNPLILMR  
 LQLPKCEALPMPESPDAANCMRIGIPAERLGRYHQCYNGSGMDYRGTASTTKSGHQCPWALQHPHSHHL  
 SSTDFPELGGGHAYCRNPGGQMEGPWCFTQNKNVRMELCDVPSCSPRDSKMGILYILVPSIAIPLVIAC  
 LFFLVCMCRNKQKASASTPQRRQLMASPSQDMEMPLINQHKQAKLKEISLSAVRFMEELGEDRFKGVYK  
 HLFPGAPGEQTQAVAIKTLKDKAEGPLREEFRHEAMLRARLQHPNVVCLLGVVTKDQPLSMIFSYSCHGD  
 LHEFLVMRSPHSDVGSTDDRTVKSALEPPDFVHLVAQIAAGMEYLSSHVVHKDLATRKLVLVYDKLNVK  
 ISDLGLFREYYAADYYKLLGNSLLPIRWMAPEAIMYGKFSIDSDIWSYGVVLWEVFSYGLQPYCGYSNQD  
 VVEMIRNRQVLPDPDCPAVVYALMIECWNEFPSRRPRFKDIHSRLRAWGNLSNYNSSAQTSGASNTTQT  
 SSLSTSPVSNVSNARYVGPQKAPFPQPFIPMKGQIRPMVPPPQLVYPVNGYQVPYAGAYLPNFYYPV  
 QIPMQMAPQQVPPQMVPKPSSHHSVSGSGSTSTGYVTTAPSNTSMADRAALLSEGADDTQNAPEDGAQSTVQ  
 EAEIEEEGSPETELLGDCDTLQVDEAQVQLEA

SGPTRRRL**E**QKL**I**SEED**L**AAND**I**LDYK**D**DDDKV

**Chromatograms:** /chromatograms/ja2518\_d06.zip

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



\* 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:** 2829 bp

**RefSeq ORF:** 2832 bp

**Locus ID:** 4920

**Cytogenetics:** 9q22.31

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

**MW:** 103.7 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]