

## Product datasheet for **RC215640**

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

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	ROR2 (NM_004560) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ROR2
Synonyms:	BDB; BDB1; NTRKR2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RC215640 representing NM\_004560  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCCCGGGCTCGGCGTCCCAGCGCGCGCTGCTGTGCATCCCGGCGCTGCGGCGCCCGCGCGC  
 TTCTGCTCTCAGTGTCCCGACTTCAGGTGAAGTGGAGTTCTGGATCCGAACGACCCTTTAGGACCCCT  
 TGATGGGCAGGACGCGCCGATTCCAACCTCTGAAAGTTACTTTCTGAATTTCTGGAGCCAGTAAACAAT  
 ATCACCATTGTCCAAGGCCAGACGGCAATTCTGCACTGCAAGGTGGCAGGAAACCCACCCCTAACGTGC  
 GGTGGCTAAAGAATGATGCCCGGTGGTGCAGGAGCCGCGCGGATCATCATCCGGAAGACAGAATATGG  
 TTCAGACTGCGAATCCAGGACCTGGACACGACAGACTGGCTACTACCAGTGCCTGGCCACCAACGGG  
 ATGAAGACCATTACCGCACTGGCGTCTGTTTGTGCGGTGGTCCAACGCACAGCCAAATCATAACT  
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 CAACCGGACCATTATGTGGACTCGCTTACAGTGCAGGGGAGATTGAAAACCGAATCACAGCGGCCTTC  
 ACCATGATCGGCACGTCTACGCACCTGTGCGACCAAGTGTCTCACAGTTCGCCATCCCATCCTTCTGCCACT  
 TCGTGTTCCTCTGTGCGACGCGCGCTCCCAGGACCCAAAGCCGCGTGAGCTGTGCCGCGACGAGTGCGA  
 GGTGCTGGAGAGCGACCTGTGCCCGCAGGAGTACACCATCGCCCGCTCCAACCCGCTCATCCTATGCGG  
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 AGGGGCCCTGCGGGAGGAGTCCGGCATGAGGCTATGCTGCGAGCACGGCTGCAACACCCCAACGTCGT  
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 AGTCCGCCCTGGAGCCCCGACTTCGTGCACCTTGTGGCACAGATCGCGCGGGGATGGAGTACCTATC  
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 ATCTCAGACTTGGGCTCTTCCGAGAGGTGATGCCGCGGATTACTACAAGCTGTGGGAACTCGCTGC  
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 GAAGCAGAGGAGGAGGAAGGCTCTGTCCAGAGACTGAGCTGCTGGGGACTGTGACACTCTGCAGG  
 TGGACGAGGCCAAGTCCAGCTGGAAGCT

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC215640 representing NM\_004560  
 Red=Cloning site Green=Tags(s)

MARGSALPRRPLLCIPAVWAAAALLLSVSRTSGEVEVLDPNDPLGPLDGQDGIPTLKGYFLNFLEPVNN  
 ITIVVQQTAILHCKVAGNPPNVRWLKNDAPVVQEPRIIRKTEYGSRLRIQDLDTTDTGYQC VATNG  
 MKTITATGVLVRLGPTHSPNHNFQDDYHEDGFCQPYRGIACARFIGNRTIYVDSLQMQGEIENRITA AF  
 TMIGTSTHLSQCSQFAIPSFCHFVPLCDARSRAPKPRELCRDECEVLES D LCRQEYTIARSNPLILMR  
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 HLFGPAPGEQTQAVAIKTLKDKAEGPLREEFRHEAMLRARLQHPNVVCLLGVVTKDQPLSMIFSYCSHG D  
 LHEFLVMRSPHSDVGSTDDDRTVKSALEPPDFVHLVAQIAAGMEYLSHHVVKDLATRNVLVYDKLNVK  
 ISDLGLFREYYAADYYKLLGNSLLPIRWMAPEAIMYGKFSIDSDIWSYGVVLWEVFSYGLQPYCGYSNQD  
 VVEMIRNRQVLPDPCPAWVYALMIECWNEFSPRRPRFKDIHSRLRAWGNLSNYSSAQTSGASNTTQT  
 SSLSTSPVSNVSNARYVGPQKAPFPQPQIPMKGQIRPMVPPQLYIPVNGYQVPYAGAYLPNFYYPV  
 QIPMQMAPQQVPPQMVKPKSSHSGSGSTSTGYVTTAPSNTSMADRAALLSEGADDTQNAPEDGAQSTVQ  
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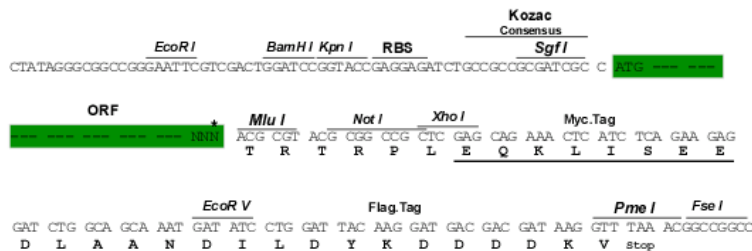
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mg2729\\_c01.zip](https://cdn.origene.com/chromatograms/mg2729_c01.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



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

**ACCN:** NM\_004560

**ORF Size:** 2829 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](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).

**Reconstitution Method:**

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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_004560.4](#)

**RefSeq Size:** 4091 bp

**RefSeq ORF:** 2832 bp

**Locus ID:** 4920

**UniProt ID:** [Q01974](#)

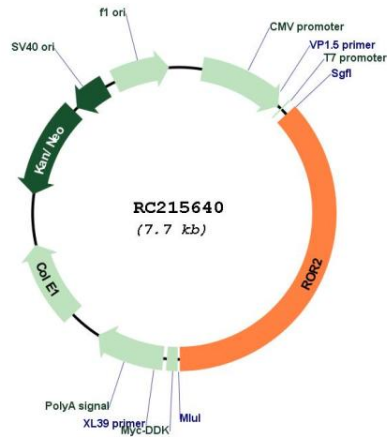
**Cytogenetics:** 9q22.31

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

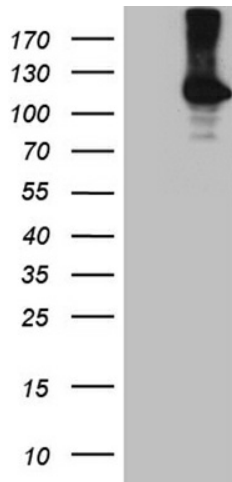
**MW:** 104.74 kDa

**Gene Summary:**

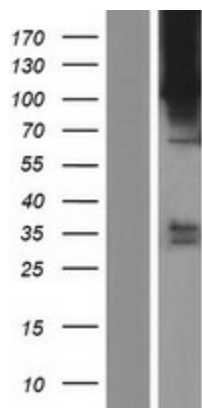
The protein encoded by this gene is a receptor protein tyrosine kinase and type I transmembrane protein that belongs to the ROR subfamily of cell surface receptors. The protein may be involved in the early formation of the chondrocytes and may be required for cartilage and growth plate development. Mutations 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]

**Product images:**


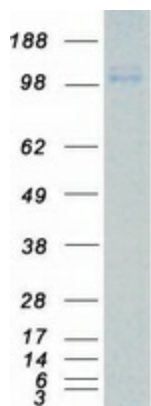
Circular map for RC215640



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY ROR2 (Cat# RC215640, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-ROR2 (Cat# [TA810020])(1:2000). Positive lysates [LY417906] (100ug) and [LC417906] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY417906]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC215640 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ROR2 protein (Cat# [TP315640]). The protein was produced from HEK293T cells transfected with ROR2 cDNA clone (Cat# RC215640) using MegaTran 2.0 (Cat# [TT210002]).