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Product datasheet for SC323522

ROR2 (NM_004560) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ROR2 (NM_004560) Human Untagged Clone
Tag:	Tag Free
Symbol:	ROR2
Synonyms:	BDB; BDB1; NTRKR2
Mammalian Cell Selection:	None
Vector:	pCMV6-XL4
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF:

>OriGene ORF within SC323522 sequence for NM_004560 edited (data generated by NextGen Sequencing)

ATGGCCCGGGGCTCGGCGCTCCCGCGGCGGCCGCTGCTGTGCATCCCGGCCGTCTGGGCG
GCCGCCGCGCTTCTGCTCTCAGTGTCCCGGACTTCAGGTGAAGTGGAGGTTCTGGATCCG
AACGACCCTTTAGGACCCCTTGATGGGCAGGACGGCCCGATTCCAACTCTGAAAGGTTAC
TTTCTGAATTTTCTGGAGCCAGTAAACAATATCACCATTGTCCAAGGCCAGACGGCAATT
CTGCACTGCAAGGTGGCAGGAAACCCACCCCCTAACGTGCGGTGGCTAAAGAATGATGCC
CCGGTGGTGCAGGAGCCGCGGCGGATCATCATCCGGAAGACAGAATATGGTTCACGACTG
CGAATCCAGGACCTGGACACGACAGACACTGGCTACTACCAGTGCGTGGCCACCAACGGG
ATGAAGACCATTACCGCCACTGGCGTCCTGTTTGTGCGGCTGGGTCCAACGCACAGCCCA
AATCATAACTTTCAGGATGATTACCACGAGGATGGGTTCTGCCAGCCTTACCGGGGAATT
GCCTGTGCACGCTTCATTGGCAACCGGACCATTTATGTGGACTCGCTTCAGATGCAGGGG
GAGATTGAAAACCGAATCACAGCGGCCTTCACCATGATCGGCACGTCTACGCACCTGTCG
GACCAGTGCTCACAGTTCGCCATCCCATCCTTCTGCCACTTCGTGTTTCCTCTGTGCGAC
GCGCGCTCCCGGGCACCCAAGCCGCGTGAGCTGTGCCGCGACGAGTGCGAGGTGCTGGAG
AGCGACCTGTGCCGCCAGGAGTACACCATCGCCCGCTCCAACCCGCTCATCCTCATGCGG
CTTCAGCTGCCCAAGTGTGAGGCGCTGCCCATGCCTGAGAGCCCCGACGCTGCCAACTGC
ATGCGCATTGGCATCCCAGCCGAGAGGCTGGGCCGCTACCATCAGTGCTATAACGGCTCA
GGCATGGATTACAGAGGAACGGCAAGCACCACCAAGTCAGGCCACCAGTGCCAGCCGTGG
GCCCTGCAGCACCCCCACAGCCACCACCTGTCCAGCACAGACTTCCCTGAGCTTGGAGGG
GGGCACGCCTACTGCCGGAACCCCGGAGGCCAGATGGAGGGCCCCTGGTGCTTTACGCAG
AATAAAAACGTACGCATGGAACTGTGTGACGTACCCTCGTGTAGTCCCCGAGACAGCAGC
AAGATGGGGATTCTGTACATCTTGGTCCCCAGCATCGCAATTCCACTGGTCATCGCTTGC
CTTTTCTTCTTGGTTTGCATGTGCCGGAATAAGCAGAAGGCATCTGCGTCCACACCGCAG
CGGCGACAGCTGATGGCCTCGCCCAGCCAAGACATGGAAATGCCCCTCATTAACCAGCAC
AAACAGGCCAAACTCAAAGAGATCAGCCTGTCTGCGGTGAGGTTCATGGAGGAGCTGGGA
GAGGACCGGTTTGGGAAAGTCTACAAAGGTCACCTGTTCGGCCCTGCCCCGGGGGAGCAG

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ACCCAGGCTGTGGCCATCATGACGCTGAAGGACAAAGCGGAGGGGCCCCTGCGGGAGGAG
TTCCGGCATGAGGCTATGCTGCGAGCACGGCTGCAACACCCCAACGTCGTCTGCCTGCTG
GGCGTGGTGACCAAGGACCAGCCCCTGAGCATGATCTTCAGCTACTGTTCGCACGGCGAC
CTCCACGAATTCCTGGTCATGCGCTCGCCGCACTCGGACGTGGGCAGCACCGATGATGAC
CGCACGGTGAAGTCCGCCCTGGAGCCCCCCGACTTCGTGCACCTTGTGGCACAGATCGCG
GCGGGGATGGAGTACCTATCCAGCCACCACGTGGTTCACAAGGACCTGGCCACCCGCAAT
GTGCTAGTGTACGACAAGCTGAACGTGAAGATCTCAGACTTGGGCCTCTTCCGAGAGGTG
TATGCCGCCGATTACTACAAGCTGCTGGGGAACTCGCTGCTGCCTATCCGCTGGATGGCC
CCAGAGGCCATCATGTACGGCAAGTTCTCCATCGACTCAGACATCTGGTCCTACGGTGTG
GTCCTGTGGGAGGTCTTCAGCTACGGCCTGCAGCCCTACTGCGGGTATTCCAACCAGGAT
GTGGTGGAGATGATCCGGAACCGGCAGGTGCTGCCTTGCCCCGATGACTGTCCCGCCTGG
GTGTATGCCCTCATGATCGAGTGCTGGAACGAGTTCCCCAGCCGGCGGCCCCGCTTCAAG
GACATCCACAGCCGGCTCCGAGCCTGGGGCAACCTTTCCAACTACAACAGCTCGGCGCAG
ACCTCGGGGGCCAGCAACACCACGCAGACCAGCTCCCTGAGCACCAGCCCAGTGAGCAAT
GTGAGCAACGCCCGCTACGTGGGGCCCAAGCAGAAGGCCCCGCCCTTCCCACAGCCCCAG
TTCATCCCCATGAAGGGCCAGATCAGACCCATGGTGCCCCCGCCGCAGCTCTACATCCCC
GTCAACGGCTACCAGCCGGTGCCGGCCTATGGGGCCTACCTGCCCAACTTCTACCCGGTG
CAGATCCCAATGCAGATGGCCCCGCAGCAGGTGCCTCCTCAGATGGTCCCCAAGCCCAGC
TCACACCACAGTGGCAGTGGCTCCACCAGCACAGGCTACGTCACCACGGCCCCCTCCAAC
ACATCCATGGCAGACAGGGCAGCCCTGCTCTCAGAGGGCGCTGATGACACACAGAACGCC
CCAGAAGATGGGGCCCAGAGCACCGTGCAGGAAGCAGAGGAGGAGGAGGAAGGCTCTGTC
CCAGAGACTGAGCTGCTGGGGGACTGTGACACTCTGCAGGTGGACGAGGCCCAAGTCCAG
CTGGAAGCTTGA

Clone variation with respect to NM_004560.3
733 a=>g;1520 a=>t;1521 a=>g;2088 c=>t;2455 g=>a

5' Read Nucleotide Sequence:

>OriGene 5' read for mutant NM_004560 unedited
ACGTCCGACCTACCAACGAGCGGAGGCGCGCACGGCGGGAGGACAACACAAGCAGAGCACGCCCAGCGAA
CCGTCAGAGAAACGAAACACGACACACAAAAGGGCGGCCGCGAACACGGCACCAGGGACCTCGAAGCGGA
CCCGTCCGCGAAGCGCCAGGGAGAAGGAGGAGCGGACGCATCGTAGAAAGGGGTTGGTGGCGCCCGACCC
CGCGCCCCGGCCCGAAGCTCTGAGGGCTTCCCGGCCCCCACTGCCTGCGGCATGGCCCGGGGCTCGGCGC
TCCCCGCGGCGGCCGCTGCTGTGCATCCCGGGCCGTCTGGGCGGGCCGCCCGCGCTTCTGCTCTCAGTGT
CCGGGACTTTCAGGTGAAATTGGAGGTTCTGGGATCCGAACGACCCTTTAGAACCCCTTGAGGGCCAGAA
CGGCCCAATTCCACCTCTGAAAGGTTACTTTCTAATTTTTCTGAACCCAGTAAACAATATCCCCATTGTC
CAGGGCCGACGGCAATTCCGCCCTGCAAGGTGGGCGGGAACCCCCCCCCTTACGTGCCGGGGCCTAAGAA
TTAAGCCCCCGGGGGGCAAGAGCCCCGGCCGGATCAACTTCCCGAAAAACGAAATGGGTTACGACTGCGG
AATCCAGGACCTGGGCACCACAGACACTGGGTTCTATCCATGCGTGGGCCCCCCCCGGGTGAAAACACTT
TCCCCCCTGGGGTCCTGTGTTTGCGCGCGGGGTCCCACCCACCCCCATATTAACTTTAGAGAATATCACG
AGATGGGGGTCTGCGCCCCCTATCGCGGGATGCCGTGGCGCCTCTCTGCACCGGCACTTATGGACCTTCA
GCCGGGGGATTAGAACCATCACGGCCTTCACGTATGGCGCTCCACTGTCGACATGTCCAGTTGCATCACT
CTTGCAATAGGTACCTGGCACGCGCTTCTGGACACAGCCGTAGATA

Kinase Domain Sequence:

>SC323522 kinase domain raw sequence. By performing BLASTX analysis with this sequence against NCBI refernce protein database, you can confirm the presence of the kinase-deficient mutation
TGCAGMGGTTGGGAGTCTACARGGTCACCTGTTCGGCCCTGCCCCGGGGGAGCAGACCCAGGCTGTGGCC
ATCATGACGCTGAAGGACAAAGCGGAGGGGCCCCTGCGGGAGGAGTTCCGGCATGAGGCTATGCTGCGAG
CACGGCTGCAACACCCCAACGTCGTCTGCCTGCTGGGCGTGGTGACCAAGGACCAGCCCCTGAGCATGAT
CTTCAGCTACTGTTCGCACGGCGACCTCCACGAATTCCTGGTCAT

Restriction Sites: Please inquire

ACCN: NM_004560

Insert Size:	3600 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:	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:	NM_004560.2, NP_004551.2
RefSeq Size:	4099 bp
RefSeq ORF:	2832 bp
Locus ID:	4920
UniProt ID:	Q01974
Cytogenetics:	9q22.31
Protein Families:	Druggable Genome, Protein Kinase, Transmembrane

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]
Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (1).