

Product datasheet for **MR230226**

Rorc (NM_001293734) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Rorc (NM_001293734) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Rorc
Synonyms:	Nr1f3; RORgamma; Thor; TOR
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR230226 representing NM_001293734
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGAGAACACAAATTGAAGTGATCCCTTGAAGATCTGTGGGACAAAGTCATCTGGGATCCACTACGGG
 TTATCACCTGTGAGGGGTGCAAGGGCTTCTCCGCCGACGCCAGCAGTGAATGTGGCCTACTCCTGCAC
 GCGTCAGCAGAACTGCCCCATTGACCGAACCGCAACCGATGCCAGCATTGCCGCTGCAGAAAGTGC
 CTGGCTCTGGGCATGTCCGAGATGCTGTCAAGTTTGGCCGAATGTCCAAGAAGCAGAGGGACAGTCTAC
 ATGCAGAAAGTGCAGAAACAACTGCAACAGCAGCAGCAACAGGAACAAGTGGCCAAGACTCCTCCAGCTGG
 GAGCCGCGGAGCAGACACTTACATACACTTTAGGGCTCTCAGATGGGCAGCTACCACTGGGCGCTCA
 CCTGACCTACCCGAGGCTCTGCTTGTCCCCTGGCCTCTGAGAGCCTCAGGCTCTGGCCACCATTATT
 CCAATACCTTGGCCAAAACAGAGGTCCAGGGGGCTCTGCCACCTTGAGTATAGTCCAGAACGAGGCAA
 AGCTGAAGGCAGAGACAGCATCTATAGCACTGACGGCCAACTTACTCTTGAAGATGTGGACTTCGTTTT
 GAGGAAACCAGGCATCCTGAACCTGGGGAACAGAACAGGGTCCAGACAGCCACTGCATTCACAGTTTCT
 GCAGTGCCCCAGAGGTACCATATGCCTCTCTGACAGACATAGAGTACCTGGTACAGAATGTCTGCAAGTC
 CTTCCGAGAGACATGCCAGCTGCGACTGGAGGACCTTCTACGGCAGCGCACCAACCTCTTTTACGGGAG
 GAGGTGACCAGCTACCAGAGGAAGTCAATGTGGGAGATGTGGGAGCGCTGTGCCACCACCTCACTGAGG
 CCATTCAGTATGTGGTGGAGTTTGCCAAGCGGCTTTCAGGCTTCATGGAGCTCTGCCAGAATGACCAGAT
 CATACTACTGAAAGCAGGAGCAATGGAAGTCGCTAGTCAGAATGTGCAGGGCCTACAATGCCAACAC
 CACACAGTCTTTTTGAAGGCAAATACGGTGGTGTGGAGCTGTTTCGAGCCTTGGGCTGCAGCGAGCTCA
 TCAGTCCATATTTGACTTTTCCCACTTCTCAGCGCCCTGTGTTTTCTGAGGATGAGATTGCCCTCTA
 CACGGCCCTGGTTCTCATCAATGCCAACCGTCTGGGCTCCAAGAGAAGAGGAGAGTGGAACATCTGCAA
 TACAATTTGGAAGTGGCTTTCCATCATCTCTGCAAGACTCATCGACAAGGCCTCTAGCCAAGCTGC
 CACCCAAAGGAAAACCTCCGAGCCTGTGCAGCAACATGTGAAAAGCTGCAGATCTTCCAGCACCTCCA
 CCCCATCGTGGTCCAAGCCGCTTCCCTCCACTCTATAAGGAAGTCTTCAGCACTGATGTTGAATCCCT
 GAGGGGCTGTCAAAG

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR230226 representing NM_001293734
 Red=Cloning site Green=Tags(s)

MRTQIEVIPCKICGDKSSGIHYGVITCEGCKGFFRRSQQCNVAYSCTRQQNCPIDRTSRNRCQHCRLLQKC
 LALGMSRDAVKFGRMSKKQRDSLHAEVQQLQQQQQEQVAKTPPAGSRGADLTYYTLGLSDGQLPLGAS
 PDLPEASACPPGLLRASGSGPPYSNTLAKTEVQGASCHLEYSPEGRGKAEGRDSIYSTDGQLTLGRCLRF
 EETRHPELGEPEQPDSCIPSFCSAPEVPYASLTDIEYLVQNVCKSFRETCLRLLEDLLRQRTNLFSSRE
 EVTSYQRKSMWEMWERCAHHLTEAIQYVVEFAKRLSGFMELCQNDQIILLKAGAMEVVLVRCRAYNANN
 HTVFFEGKYGGVELFRALGCSELISSIFDFSHFLSALCFSEDEIALYALVLINANRPLQEKRRVEHLQ
 YNLELAFHHHLCKTHRQGLLAKLPKGLRSLCSQHVEKLQIFQHLHPIVVQAAFPLYKELFSTDVESP
 EGLSK

SGPTRTRPLEQKLISEEDLAANDILDYKDDDDKV

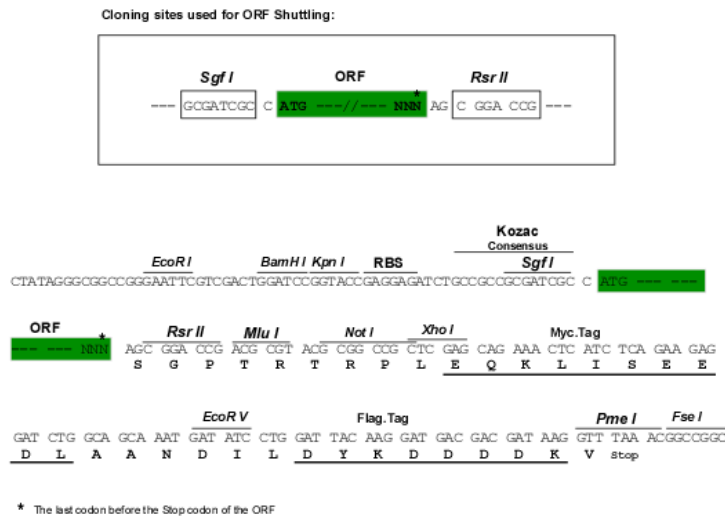
Chromatograms:

https://cdn.origene.com/chromatograms/ja3709_d05.zip

Restriction Sites:

Sgfl-RsrII

Cloning Scheme:



ACCN: NM_001293734

ORF Size: 1485 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 clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

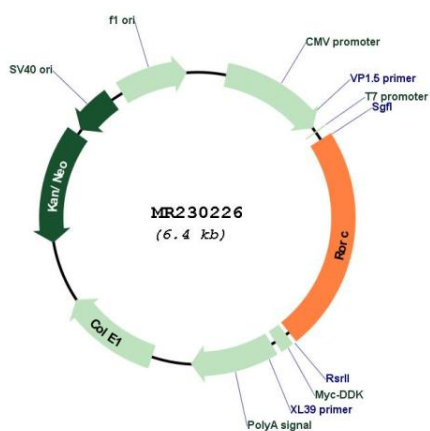
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

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:	<u>NM_001293734.1</u> , <u>NP_001280663.1</u>
RefSeq Size:	2576 bp
RefSeq ORF:	1488 bp
Locus ID:	19885
UniProt ID:	<u>P51450</u>
Cytogenetics:	3 F2.1
MW:	55.7 kDa
Gene Summary:	<p>Nuclear receptor that binds DNA as a monomer to ROR response elements (RORE) containing a single core motif half-site 5'-AGGTCA-3' preceded by a short A-T-rich sequence. Key regulator of cellular differentiation, immunity, peripheral circadian rhythm as well as lipid, steroid, xenobiotics and glucose metabolism. Considered to have intrinsic transcriptional activity, have some natural ligands like oxysterols that act as agonists (25-hydroxycholesterol) or inverse agonists (7-oxygenated sterols), enhancing or repressing the transcriptional activity, respectively. Recruits distinct combinations of cofactors to target gene regulatory regions to modulate their transcriptional expression, depending on the tissue, time and promoter contexts (PubMed:17666523, PubMed:19381306, PubMed:19965867, PubMed:21853531, PubMed:22789990, PubMed:23723244). Regulates the circadian expression of clock genes such as CRY1, ARNTL/BMAL1 and NR1D1 in peripheral tissues and in a tissue-selective manner (PubMed:22753030). Competes with NR1D1 for binding to their shared DNA response element on some clock genes such as ARNTL/BMAL1, CRY1 and NR1D1 itself, resulting in NR1D1-mediated repression or RORC-mediated activation of the expression, leading to the circadian pattern of clock genes expression. Therefore influences the period length and stability of the clock (PubMed:22753030). Involved in the regulation of the rhythmic expression of genes involved in glucose and lipid metabolism, including PLIN2 and AVPR1A. Negative regulator of adipocyte differentiation through the regulation of early phase genes expression, such as MMP3. Controls adipogenesis as well as adipocyte size and modulates insulin sensitivity in obesity. In liver, has specific and redundant functions with RORA as positive or negative modulator of expression of genes encoding phase I and Phase II proteins involved in the metabolism of lipids, steroids and xenobiotics, such as SULT1E1 (PubMed:21853531). Also plays also a role in the regulation of hepatocyte glucose metabolism through the regulation of G6PC and PCK1. Regulates the rhythmic expression of PROX1 and promotes its nuclear localization.[UniProtKB/Swiss-Prot Function]</p>

Product images:



Circular map for MR230226