

## Product datasheet for **MC202822**

### Rara (NM\_009024) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Rara (NM_009024) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Rara
Synonyms:	Nr1b1; RAR; RARalpha1
Mammalian Cell Selection:	Neomycin
Vector:	PCMV6-Kan/Neo (PCMV6KN)
E. coli Selection:	Kanamycin (25 ug/mL)



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**Fully Sequenced ORF:** >BC010216 sequence for NM\_009024  
 TCAGCCTCTGCACGTGACTCGCCATGGCCGCTGCCGTGCCCCGCGCCCCTGAGCTGCGGCCCCCGGAC  
 GGCTCCTCTCGGAGGACCCACACCCCTGACGCCGGGACGCGCCGCGGCGCTGCTTGGGGCAGACCCTG  
 TGCCCCGAGACACGCAGACGGGTTGCATCCCTCGCTTCGAGCACCACAGGACATGCCTCCCCCAGCCA  
 CCTACCTGGGGCCTTCTGGGAGTGGCATCCTCTTTGATACCTGAAGACCAGCTCTGGACCTTCTTACA  
 AAAGTGTCTCCCAGGACCGCTTAACCAAGGACGGATTCTTGGGACATCCCCCAATCCACCTGGCCCCC  
 CGGTAGGGAGGGGGACCCAGAAGACTAAAGTTGACTAACTTGGGACTTGAGCTCCAGGGACAGAAGGG  
 GGTGGGGGTGGGCTGACCACCCAACCCCTCTGGGCCCCCGCCCATGCCCCGAGGAAGAGGGACT  
 GCGTGAAGGCCATCACAACCTACCTGCCAGACTGTTTGCCTGCTCTTCTGACTGTGGCTGCTTGGCATGGC  
 CAGCAATAGCAGTTCCTGCCAACACCTGGGGGCGGGCACCTCAATGGGTACCCAGTACCCCTACGCC  
 TTCTTCTTCCCCCTATGCTGGGTGGACTCTCCCACCCGGCGCTCTACCAGCTCCAGCACCAGCTTC  
 CAGTCAGTGGTTACAGCACACCGTCCCCAGCCACCATCGAGACCCAGAGCAGCAGTTCGGAAGAGATAGT  
 ACCCAGCCCTCCCTACCACCGCCCTGCCCGCATCTACAAGCCTTGCTTTGTTGTCAAGACAAATCA  
 TCCGGCTACCACTATGGGGTCAGTGCCTGTGAGGGCTGTAAAGGGTCTTCCGACGAAGCATCCAGAAGA  
 ACATGGTGTATACGTGTACCGGACAAGAAGTGCATCATCAACAAGGTGACCCGGAACCGCTGCCAGTA  
 CTGCCGGCTGCAGAAATGTTTCGACGTGGGCATGTCCAAGGAGTGGTGGCAAACGATCGAAACAAAAAG  
 AAGAAAGAGGCACCCAAGCCGAGTGCTCAGAGAGCTACACGCTGACGCCTGAGGTGGGGAGCTCATTG  
 AGAAGGTTTCGAAAGCGCACCAGGAGACCTTCCCGCCCTCTGCCAGCTGGGCAAGTACACTACGAACA  
 CAGCTCAGAACAACGAGTCTCCCTGGACATTGACCTCTGGGACAAGTTCAAGTGAAGTCTCCACCAAGTGC  
 ATCATTAAAGACTGTGGAGTTCGCAAGCAGCTTCCCGGCTTACCACCCCTACCATCGCCGACCAGATCA  
 CCCTCCTCAAGGCTGCCTGCCTGGATATCCTGATTCTGCGAATCTGCACGCGGTACACGCTGAGCAAGA  
 CACAATGACCTTCTCAGATGGACTGACCCTGAACCGGACTCAGATGCACAACGCTGGCTTTGGCCCCCTC  
 ACCGACTTGGTCTTTCCTTCGCAACAGCTGCTGCCCTGGAGATGGACGATGCTGAGACTGGACTGC  
 TCAGTGCCATCTGCCTCATCTGTGGAGACCGACAGGACCTGGAGCAGCCAGACAAGGTGGACATGCTGCA  
 AGAGCCGCTGCTGGAAGCACTGAAAGTCTACGTCCGAAACGGAGGCCACGCCACCCACATGTTCCCC  
 AAGATGCTGATGAAGATCACAGACCTTCGGAGCATCAGCGCAAGGGAGCTGAACGGGTGATCACATTGA  
 AGATGGAGATCCCAGGCTCCATGCCACCGCTGATCCAGGAAATGCTGGAGAACTTGAGGGCTTGGACAC  
 TCTAAGCGGACAGTCGGGGGGCGGAACACGAGATGGGGTGGCCTGGCCCCCTCCGGGTAGCTGTAGC  
 CCCAGCTCAGTCCCAGCTCCCACAGAAGCAGCCAGCCACCCAATCCCCATGACCACCTCGACACACGG  
 ACAGCCCTCACCCCTGCCCTGGCTTCTCTGCCTTCTGCTGGCCGTGTGACCTGTGGCCCCGGGCCCCG  
 CTTGTCCTCTCAGACAGAAGTGGTACCTTCCAGGGGGACAGGAAGGAGAAGGCAGTACTCTGTGGAC  
 AGAGGCCCTGGACCAAGATGGACTGCCCTTCCGGCAGCCTGGGCTGGCATCGGGCCAGGCGTTGAGCC  
 ACATGAGGACCTGGGCCTGAGCCCTCACCCACCTTGCCACGTCTTCATCACCCAGCAAACCGCGGACCTG  
 GCTCCCTGCTCGGAACTCAAGCCATCGCTCCCAGATGGGGACTTCCCCCGACCCCCGCTTTGGATG  
 GTGACAGAGGGTGGCCAGGGTGGGGGAGACTCCCTGTACATATCCTGCGTACCAATCCCCAGATATTAAT  
 TCTCGTTGGTTTTGTTTTATTTAATTTTTTGTTTTTTGTTTTTTGTTTTTTGGTTTTTTTAATAAG  
 AATTTTCATTTAAGCACAAAAA

**Restriction Sites:** RsrII-NotI  
**ACCN:** NM\_009024  
**Insert Size:** 1389 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](#)

**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:** [BC010216](#), [AAH10216](#)

**RefSeq Size:** 2483 bp

**RefSeq ORF:** 1389 bp

**Locus ID:** 19401

**UniProt ID:** [P11416](#)

**Cytogenetics:** 11 62.76 cM

**Gene Summary:**

Receptor for retinoic acid (PubMed:17205979). Retinoic acid receptors bind as heterodimers to their target response elements in response to their ligands, all-trans or 9-cis retinoic acid, and regulate gene expression in various biological processes (PubMed:17205979). The RXR/RAR heterodimers bind to the retinoic acid response elements (RARE) composed of tandem 5'-AGGTCA-3' sites known as DR1-DR5 (PubMed:17205979). In the absence of ligand, the RXR-RAR heterodimers associate with a multiprotein complex containing transcription corepressors that induce histone deacetylation, chromatin condensation and transcriptional suppression (By similarity). On ligand binding, the corepressors dissociate from the receptors and associate with the coactivators leading to transcriptional activation (PubMed:17205979, PubMed:9230306, PubMed:19078967). Formation of heterocomplex with histone deacetylases might lead to inhibition of RARE DNA element binding and to transcriptional repression (By similarity). Transcriptional activation and RARE DNA element binding might be supported by the transcription factor KLF2 (By similarity). RARA plays an essential role in the regulation of retinoic acid-induced germ cell development during spermatogenesis (PubMed:15901285). Has a role in the survival of early spermatocytes at the beginning prophase of meiosis (PubMed:15901285, PubMed:17905941). In Sertoli cells, may promote the survival and development of early meiotic prophase spermatocytes (PubMed:10660575, PubMed:17905941). In concert with RARG, required for skeletal growth, matrix homeostasis and growth plate function (PubMed:19389355). Together with RXRA, positively regulates microRNA-10a expression, thereby inhibiting the GATA6/VCAM1 signaling response to pulsatile shear stress in vascular endothelial cells (By similarity). In association with HDAC3, HDAC5 and HDAC7 corepressors, plays a role in the repression of microRNA-10a and thereby promotes the inflammatory response (By similarity).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (1) encodes the longest isoform (1).