

## Product datasheet for **MR225597**

### Rara (NM\_001177302) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Rara (NM_001177302) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Rara
Synonyms:	Nr1b1; RAR; RARalpha1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>MR225597 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCCAGCAATAGCAGTTCCTGCCAACACCTGGGGCGGGCACCTCAATGGGTACCCAGTACCCCCCT  
 ACGCCTTCTTCTTCCCCCTATGCTGGGTGGACTCTCCACCCGCGCTCTCACCAGCCTCCAGCACCA  
 GCTTCCAGTCAGTGGTTACAGCACACCGTCCCCAGCCACCATCGAGACCCAGAGCAGCAGTTCGGAAGAG  
 ATAGTACCCAGCCCTCCCTCACCACCGCCCTGCCCGCATCTACAAGCCTTGCTTTGTTGTCAAGACA  
 AATCATCCGGCTACCACTATGGGGTCAGTGCCTGTGAGGGCTGTAAGGGCTTCTCCGACGAAGCATCCA  
 GAAGAACATGGTGTATACGTGTACCGGGACAAGAACTGCATCATCAACAAGGTGACCCGGAACCGTGC  
 CAGTACTGCCGGCTGCAGAAATGTTTCGACGTGGGCATGTCCAAGGAGTCGGTGCGAAACGATCGAAACA  
 AAAAGAAGAAAGAGGCCACCAAGCCGAGTGCTCAGAGAGCTACACGCTGACGCCTGAGGTGGGCGAGCT  
 CATTGAGAAGGTTGCGAAAGCGCACAGGAGACCTTCCCGCCCTCTGCCAGCTGGCAAGTACACTACG  
 AACACAGCTCAGAACACGAGTCTCCCTGGACATTGACCTCTGGGACAAGTTTCACTGAAGTCTCCACCA  
 AGTGCATCATTAAAGACTGTGGAGTTCGCAAGCAGCTTCCCGGCTTACCACCCCTCACCATCGCCGACCA  
 GATCACCCCTCAAGGCTGCCTGCCTGGATATCCTGATTCTGCGAATCTGCACGCGGTACACGCCTGAG  
 CAAGACACAATGACCTTCTCAGATGGACTGACCCTGAACCGGACTCAGATGCACAACGCTGGCTTTGGCC  
 CCCTCACCAGCTTGGTCTTTGCCTTCGCAACCAGCTGCTGCCCTGGAGATGGACGATGCTGAGACTGG  
 ACTGCTCAGTGCATCTGCCTCATCTGTGGAGACCGACAGGACCTGGAGCAGCCAGACAAGTGGACATG  
 CTGCAAGAGCCGCTGCTGGAAGCACTGAAAGTCTACGTCGGAACCGAGGCCAGCCGACCCACATGT  
 TCCCAAGATGCTGATGAAGATCACAGACCTTCGGAGCATCAGCGCAAGGGAGCTGAACGGGTGATCAC  
 ATTGAAGATGGAGATCCAGGCTCCATGCCACCGCTGATCCAGGAAATGCTGGAGAAGTCTGAGGGCTTG  
 GACACTCTAAGCGGACAGTCGGGGGCGGAACACGAGATGGGGTGGCCTGGCCCCCTCCGGGTAGCT  
 GTAGCCCCAGCCTCAGTCCAGCTCCACAGAAGCAGCCAGCCACCCAATCCCCA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR225597 protein sequence  
 Red=Cloning site Green=Tags(s)

MASNSSSCTPGGGHLNGYPVPPYAFFFPMLGGLSPPGALTSLQHLQPVSGYSTPSPATIETQSSSSEE  
 IVPSPSPPLPRIYKPCFVCQDKSSGYHYGVSAECGCKGFFRRSIQKNMYYTCHRDKNCIINKVTRNRC  
 QYCRLQKCFDVGMSKESVRNDRNKKKKEAPKPECSESYLTPEVGELIEKVRKAHQETFPALCQLGKYTT  
 NNSSEQRVSLDIDLWDFSELSTKCIIKTVEFAKQLPGFTTLTIADQITLLKAACLDILILRICTRYTPE  
 QDTMTFSDGLTLNRTQMHNAGFGPLTDLVFAFANQLLPLEMDDAETGLLSAICLICGDRQDLEQDPKVD  
 LQEPLLEALKVYVRRRPSRPHMFKMLMKITDLRSISAKGAERVITLKMEIPGSMPLIQEMLENSEGL  
 DTLSGQSGGTRDGGGLAPPGSCSPSLSPSSHRSSPATQSP

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_001177302

**ORF 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](#)

**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.

RefSeq: [NM\\_001177302.1](#), [NP\\_001170773.1](#)

RefSeq Size: 3384 bp

RefSeq ORF: 1389 bp

Locus ID: 19401

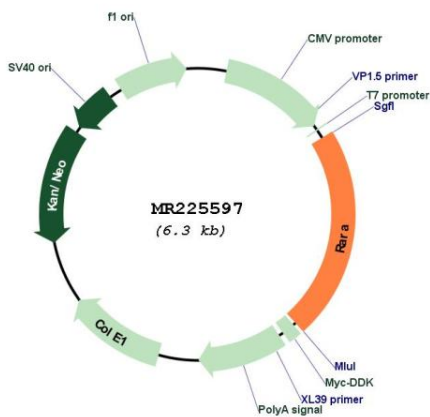
UniProt ID: [P11416](#)

Cytogenetics: 11 62.76 cM

MW: 50.7 kDa

**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]

Product images:



Circular map for MR225597