

Product datasheet for **MG225597**

Rara (NM_001177302) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Rara (NM_001177302) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Rara
Synonyms:	Nr1b1; RAR; RARalpha1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG225597 representing NM_001177302
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCCAGCAATAGCAGTTCCTGCCAACACCTGGGGCGGGCACCTCAATGGGTACCCAGTACCCCCCT
 ACGCCTTCTTCTTCCCCCTATGCTGGGTGGACTCTCCACCCGCGCTCTCACCAGCCTCCAGCACCA
 GCTTCCAGTCAGTGTTACAGCACACCGTCCCCAGCCACCATCGAGACCCAGAGCAGCAGTTCGGAAGAG
 ATAGTACCCAGCCTCCCTCACCACCGCCCTGCCCGCATCTACAAGCCTTGCTTTGTTGTCAAGACA
 AATCATCCGGCTACCACTATGGGGTCAGCGCTGTGAGGGCTGTAAGGGCTTCTCCGACGAAGCATCCA
 GAAGAACATGGTGATACGTGTACCGGGACAAGAAGTGCATCATCAACAAGGTGACCCGGAACCGCTGC
 CAGTACTGCCGGCTGCAGAAATGTTTCGACGTGGGCATGTCCAAGGAGTCGGTGCAGAACGATCGAAACA
 AAAAGAAGAAAGAGGCACCCAAGCCGAGTGCTCAGAGAGCTACACGCTGACGCCTGAGGTGGGCGAGCT
 CATTGAGAAGGTTTCGAAAGCGCACAGGAGACCTTCCCGCCCTCTGCCAGCTGGCAAGTACACTACG
 AACACAGCTCAGAACACGAGTCTCCCTGGACATTGACCTCTGGGACAAGTTTCACTGAAGTCTCCACCA
 AGTGATCATTAAAGACTGTGGAGTTCGCAAGCAGCTTCCCGGCTTACCACCCCTCACCATCGCCGACCA
 GATCACCCCTCTCAAGGCTGCCTGCCTGGATATCCTGATTCTGCGAATCTGCACGCGGTACACGCCTGAG
 CAAGACACAATGACCTTCTCAGATGGACTGACCTGAACCGGACTCAGATGCACAACGCTGGCTTTGGCC
 CCCTCACCGACTTGGTCTTTGCCTTCGCCAACAGCTGCTGCCCTGGAGATGGACGATGCTGAGACTGG
 ACTGCTCAGTGCCATCTGCCTCATCTGTGGAGACCGACAGGACCTGGAGCAGCCAGACAAGTGGACATG
 CTGCAAGAGCCGCTGCTGGAAGCACTGAAAGTCTACGTCGGAAACGGAGGCCAGCCGACCCACATGT
 TCCCAAGATGCTGATGAAGATCACAGACCTTCGGAGCATCAGCGCAAGGGAGCTGAACGGGTGATCAC
 ATTGAAGATGGAGATCCCAGGCTCCATGCCACCGCTGATCCAGGAAATGCTGGAGAAGTCTGAGGGCTTG
 GACACTCTAAGCGGACAGTCGGGGGCGGAACACGAGATGGGGTGGCCTGGCCCCCTCCGGGTAGCT
 GTAGCCCCAGCCTCAGTCCCAGCTCCCACAGAAGCAGCCAGCCACCCAATCCCCA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG225597 representing NM_001177302
 Red=Cloning site Green=Tags(s)

MASNSSSCTPGGGHNGYPVPPYAFFFPMLGGLSPPGALTSLQHQLPVSGYSTPSPAT IETQSSSSEE
 IVPSPSPPLPRIYKPCFVCQDKSSGYHYGVSACEGCKGFFRRSIQKNMYYTCHRDKNCIINKVTRNRC
 QYCR LQKCFDVGMSKESVRNDRNKKKKEAPKPECSESYLTPEVGELIEKVRKAHQETFPALCQLGKYTT
 NNSSEQRVSLDIDLWDFSELSTKCI IKTVEFAKQLPGFTTLTIADQITLLKAACLDILILRICTRYTPE
 QDTMTFSDGLTLNRTQMHNAGFGPLTDLVFAFANQLLPLEMDDAETGLLSAICLICGDRQDLEQPKVDM
 LQEPLLEALKVYVRKRRPSRPHMFPKMLMKITDLRSISAKGAERVITLKMEIPGSMPLLIQEMLENSEGL
 DTLSGQSGGGTRDGGGLAPPPGSCSPSLSPSSHRSSPATQSP

TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_001177302

ORF Size: 1386 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.

RefSeq: [NM_001177302.1](#), [NP_001170773.1](#)

RefSeq Size: 3384 bp

RefSeq ORF: 1389 bp

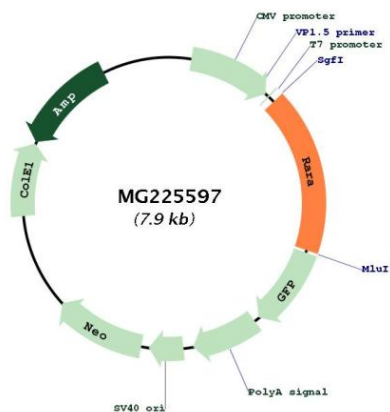
Locus ID: 19401

UniProt ID: [P11416](#)

Cytogenetics: 11 62.76 cM

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 MG225597