

Product datasheet for **MR225595**

Rara (NM_001176528) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Rara (NM_001176528) 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)



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ORF Nucleotide Sequence:

>MR225595 representing NM_001176528
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTACGAGAGTGTGGAAGTCGGGGCCTTACCCCGCCCTAACCCCTTCTAGTGGTGGACTTTTATA
 ACCAGAACCAGGGCTGTTTGTCTCCAGGAGAAGGGGCTCCCTGCCCGGGTCCCTACTCCACCCACTCCG
 GACTCCGCTTTGGAATGGCTCAAACCACTCCATCGAGACCCAGAGCAGCAGTTCGGAAGAGATAGTACCC
 AGCCCTCCCTCACCACCGCCCTGCCCGCATCTACAAGCCTTGCTTTGTTTGTCAAGACAAATCATCCG
 GCTACCACTATGGGGTCAGCGCTGTGAGGGCTGTAAGGGCTTCTCCGACGAAGCATCCAGAAGAACAT
 GGTGTATACGTGTACCCGGGACAAGAAGTGCATCATCAACAAGGTGACCCGGAACCGCTGCCAGTACTGC
 CGGCTGCAGAAATGTTTCGACGTGGGCATGTCCAAGGAGTCGGTGCAGAACGATCGAAACAAAAAGAAGA
 AAGAGGCCACCAAGCCGAGTGTCTCAGAGACTACACGCTGACGCTGAGGTGGGCGAGCTCATTGAGAA
 GGTTCGAAAGCGCACCAGGAGACTTCCCGCCCTCTGCCAGCTGGGCAAGTACTACGAAACAACAGC
 TCAAGAACAACGAGTCTCCCTGGACATTGACCTCTGGGACAAGTTCAGTGAAGTCTCCACCAAGTGCATCA
 TTAAGACTGTGGAGTTCGCCAAGCAGCTTCCCGGCTTACCACCCCTACCATCGCCGACCAGATCACCCCT
 CCTCAAGGCTGCCTGCCTGGATATCCTGATTCTGCGAATCTGCACGCGGTACACGCTGAGCAAGACACA
 ATGACCTTCTCAGATGGACTGACCTGAACCGACTCAGATGCACAACGCTGGCTTTGGCCCCCTCACCG
 ACTTGGTCTTTGCCTTCGCCAACAGCTGCTGCCCTGGAGATGGACGATGCTGAGACTGGACTGCTCAG
 TGCCATCGCCTCATCTGTGGAGACCGACAGGACTGGAGCAGCCAGACAAGGTGGACATGCTGCAAGAG
 CCGCTGCTGGAAGCACTGAAAGTCTACGTCCGAAACGGAGGCCAGCCGACCCACATGTTCCCAAGA
 TGCTGATGAAGATCACAGACCTTCGGAGCATCAGCGCAAGGGAGCTGAACGGGTGATCACATTGAAGAT
 GGAGATCCAGGCTCCATGCCACCGCTGATCCAGGAAATGCTGGAGAACTCTGAGGGCTTGACACTCTA
 AGCGGACAGTCGGGGGGCGGAACACGAGATGGGGTGGCCTGGCCCCCTCCGGGTAGCTGTAGCCCCA
 GCCTCAGTCCCAGCTCCCACAGAAGCAGCCAGCCACCCAATCCCCA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR225595 representing NM_001176528
 Red=Cloning site Green=Tags(s)

MYESVEVGLTPAPNPFLVDFYNQNRACLLQEKGLPAPGPYSTPLRTPPLWNGSNHSIETQSSSSEEIVP
 SPPSPPPLPRIYKPCFVCQDKSSGYHYGVSACEGCKGFRRSIQKNMVTCHRDKNCIINKVTRNRCQYC
 RLQKCFDVGMSKESVRNDRNKKKKEAPKPECSYTLTPEVGELIEKVRKAHQETFPALCQLGKYTTNNS
 SEQRVSLDIDLWDFSELSTKCIKTVFAKQLPGFTLLTIADQITLLKAACLDILILRICTRYTPEQDT
 MTFSDGLTLNRTQMHNAGFGPLTDLVFAFANQLLPLEMDDAETGLLSAICLICGDRQDLEQPKVDMLQE
 PLLEALKVYVRKRRSRPHMFPKMLMKITDLRSISAKGAERVITLKMEIPGSMPLIQEMLENSEGLDTL
 SGQSGGGTRDGGGLAPPPGSCSPSLSPSSHRSSPATQSP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



ACCN: NM_001176528

ORF Size: 1377 bp

OTI Disclaimer: 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_001176528.1](#), [NP_001169999.1](#)

RefSeq Size: 3179 bp

RefSeq ORF: 1380 bp

Locus ID: 19401

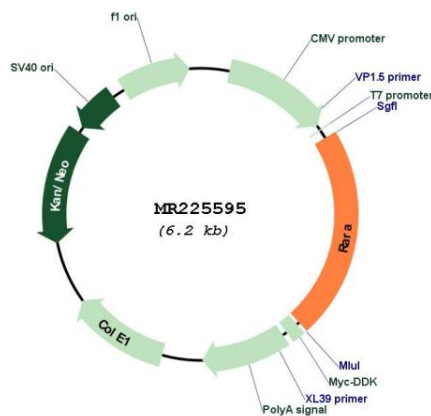
UniProt ID: [P11416](#)

Cytogenetics: 11 62.76 cM

MW: 50.9 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 MR225595