

Product datasheet for **RC239024**

Estrogen Receptor 1 (ESR1) (NM_001291241) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Estrogen Receptor 1 (ESR1) (NM_001291241) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ESR1
Synonyms:	ER; Era; ESR; ESRA; ESTRR; NR3A1
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide Sequence:

>RC239024 representing NM_001291241
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGACCATGACCCTCCACACAAAGCATCTGGGATGGCCCTACTGCATCAGATCCAAGGGAACGAGCTGG
 AGCCCTGAACCGTCCGAGCTCAAGATCCCCCTGGAGCGGCCCTGGGCGAGGTGTACCTGGACAGCAG
 CAAGCCCGCGTGTACAACCTACCCGAGGGCGCCGCTACGAGTTCAACGCCGCGCCGCCCAACCGG
 CAGGTCTACGGTCAGACCGGCTCCCTACGGCCCCGGTCTGAGGCTGCGGCGTTCCGGCTCCAACGGCC
 TGGGGGTTTTCCCCCACTCAACAGCGTGTCTCCGAGCCCGTGTACTGACCCCGCCGCCGAGCT
 GTCGCCTTCTGCAGCCCCACGGCCAGCAGGTGCCCTACTACCTGGAGAACGAGCCAGCGGCTACACG
 GTGCGCGAGGCGGCCCGCGGATTCTACAGGCCAAATTCAGATAATCGACGCCAGGTTGCAGAGAAA
 GATTGGCCAGTACCAATGACAAGGGAAGTATGGCTATGGAATCTGCCAAGGAGACTCGCTACTGTGCAGT
 GTGCAATGACTATGCTTACAGGCTACCATTATGGAGTCTGGTCTGTGAGGGCTGCAAGGCCTTCTCAAG
 AGAAGTATTCAAGGACATAACGACTATATGTGTCCAGCCACCAACAGTGCACCATTGATAAAAAACAGGA
 GGAAGAGCTGCCAGGCTGCCGGCTCCGCAATGCTACGAAGTGGGAATGATGAAAGGGATACGAAAAGA
 CCGAAGAGGAGGAGAATGTTGAAACACAAGCGCCAGAGAGATGATGGGAGGGCAGGGGTGAAGTGGGG
 TCTGCTGGAGACATGAGAGCTGCCAACCTTTGGCCAAGCCGCTCATGATCAAACGCTCTAAGAAGAACA
 GCCTGGCCTTGTCCCTGACGGCCGACAGATGGTCAGTGCCTTGTGGATGCTGAGCCCCCATACTCTA
 TTCCGAGTATGATCCTACCAGACCCTTCAGTGAAGCTTCGATGATGGGCTTACTGACCAACCTGGCAGAC
 AGGGAGCTGGTTCACATGATCAACTGGGCGAAGAGGGTCCAGGCTTTGTGGATTTGACCCCTCATGATC
 AGTCCACCTTCTAGAATGTGCCTGGCTAGAGATCCTGATGATTGGTCTCGTCTGGCGCTCCATGGAGCA
 CCCAGGGAAGCTACTGTTTGTCTCCTAAGCTTCTTGGACAGGAACAGGGAAAATGTGTAGAGGGCATG
 GTGGAGATCTTCGACATGCTGCTGGCTACATCATCTCGGTTCCGCATGATGAATCTGCAGGGAGAGGAGT
 TTGTGTGCCTCAAATCTATTATTTTGTCTAATTCTGGAGTGTACACATTTCTGTCCAGCACCTGAAGTC
 TCTGGAAGAGAAGGACATATCCACCGAGTCTGGACAAGATCACAGACACTTTGATCCACCTGATGGCC
 AAGGCAGGCTGACCCTGCAGCAGCAGCACCAGCGGCTGGCCAGCTCCTCCTCATCTCTCCACATCA
 GGCACATGAGTAACAAAGGCATGGAGCATCTGTACAGCATGAAGTGAAGAAGCTGGTCCCCTCTATGA
 CCTGCTGCTGGAGATGCTGGACGCCACCCTACATGCGCCACTAGCCGTGGAGGGGCATCCGTGGAG
 GAGACGGACCAAAGCCACTTGGCCACTGCGGGCTCTACTTCATCGCATTCTTGCAAAAGTATTACATCA
 CGGGGAGGCAGAGGGTTCCCTGCCACGGTC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC239024 representing NM_001291241
 Red=Cloning site Green=Tags(s)

MTMTLHTKASGMALLHQIQNELEPLNRPQLKIPLERPLGEVYLDSSKPAVYNYPEGAAYEFNAAAAANA
 QVYQGTGLPYGPGSEAAAFGSNGLGGFPPLNSVSPSPLMLLHPPPQLSPFLQPHGQVQVYYLENEPSGYT
 VREAGPPAFYRPNSDNRRQGGRERLASTNDKGSMAESAKETRYCAVCNDYASGYHYGVWSCEGCKAFFK
 RSIQGHNDYMCATNQCTIDKNRRKSCQACRLRKCIEVGMKGIKDRRGGRRMLKHKRQRDDGEGRGEVG
 SAGDMRAANLWPSPLMIKRSKNSLALSLTADQMVSALLDAEPPILYSEYDPTPRPFSEASMMGLLTNLAD
 RELVHMINWAKRVPGFVDLTLHDQVHLLCAWLEILMIGLVWRSMHPGKLLFAPNLLLDRNQKCVEGM
 VEIFDMLLATSSFRMMNLQGEFVCLKSIILLNSGVYFLSSTLKSLEEKDHIHRVLDKITDTL IHLMA
 KAGLTLQQHQRLAQLLLILSHIRHMSNKGMEHLYSMKCKNVVPLYDLLLEMLDAHRLHAPTSRGGASVE
 ETDQSHLATAGSTSSHSLQKYYITGEAEGFPATV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

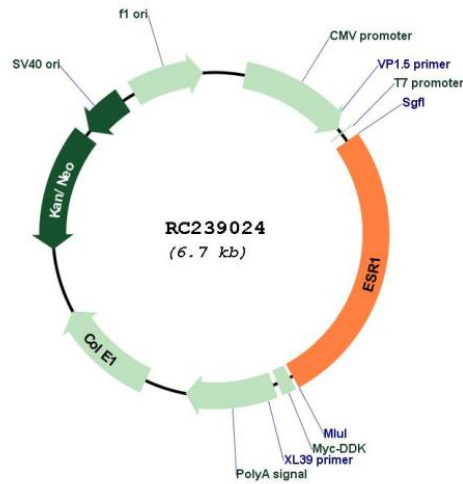
Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN: NM_001291241

ORF Size: 1782 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:	<ol style="list-style-type: none">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_001291241.1 , NP_001278170.1
RefSeq Size:	6311 bp
RefSeq ORF:	1785 bp
Locus ID:	2099
UniProt ID:	P03372
Cytogenetics:	6q25.1-q25.2
Protein Families:	Druggable Genome, Nuclear Hormone Receptor, Transcription Factors
MW:	66.6 kDa
Gene Summary:	This gene encodes an estrogen receptor and ligand-activated transcription factor. The canonical protein contains an N-terminal ligand-independent transactivation domain, a central DNA binding domain, a hinge domain, and a C-terminal ligand-dependent transactivation domain. The protein localizes to the nucleus where it may form either a homodimer or a heterodimer with estrogen receptor 2. The protein encoded by this gene regulates the transcription of many estrogen-inducible genes that play a role in growth, metabolism, sexual development, gestation, and other reproductive functions and is expressed in many non-reproductive tissues. The receptor encoded by this gene plays a key role in breast cancer, endometrial cancer, and osteoporosis. This gene is reported to have dozens of transcript variants due to the use of alternate promoters and alternative splicing, however, the full-length nature of many of these variants remain uncertain. [provided by RefSeq, Jul 2020]