

Product datasheet for **RC226004**

Estrogen Receptor 1 (ESR1) (NM_001122741) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Estrogen Receptor 1 (ESR1) (NM_001122741) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Estrogen Receptor 1
Synonyms:	ER; Era; ESR; ESRA; ESTRR; NR3A1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC226004 representing NM_001122741
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGACCATGACCCTCCACACAAAGCATCTGGGATGGCCCTACTGCATCAGATCCAAGGGAACGAGCTGG
 AGCCCCTGAACCGTCCGCAGCTCAAGATCCCCCTGGAGCGGCCCTGGGCGAGGTGTACCTGGACAGCAG
 CAAGCCC GCCGTGTACAACCTACCCGAGGGCGCCGCTACGAGTTCAACGCCGCGCCGCCCAACCGC
 CAGGTCTACGGTCAGACCGCCCTCCCCTACGGCCCCGGTCTGAGGCTGCGGCGTTCCGGCTCCAACGGCC
 TGGGGGTTTCCCCCACTCAACAGCGTGTCTCCGAGCCCGCTGATGCTACTGCACCCGCCCGCAGCT
 GTCGCCTTCTGCAGCCCCACGGCCAGCAGGTGCCCTACTACCTGGAGAACGAGCCAGCGGCTACACG
 GTGCGCGAGGCCGCCGCCGCGCATTCTACAGGCCAAATTCAGATAATCGACGCCAGGTTGCAGAGAAA
 GATTGGCCAGTACCAATGACAAGGGAAGTATGGCTATGGAATCTGCCAAGGAGACTCGCTACTGTGCAGT
 GTGCAATGACTATGCTTACAGCTACCATTATGGAGTCTGGTCTGTGAGGGCTGCAAGGCCTTCTCAAG
 AGAAGTATTCAAGGACATAACGACTATATGTGTCCAGCCACCAACAGTGCACCATTGATAAAAAACAGGA
 GGAAGAGCTGCCAGGCCTGCCGGCTCCGCAATGCTACGAAGTGGGAATGATGAAAGGTGGGATACGAAA
 AGACCGAAGAGGAGGAGAATGTTGAAACACAAGCGCCAGAGAGATGATGGGAGGGCAGGGGTGAAGTG
 GGGTCTGCTGGAGACATGAGAGCTGCCAACCTTTGGCCAGCCCGCTCATGATCAAACGCTCTAAGAAGA
 ACAGCCTGGCCTTGTCCCTGACGGCCGACCAGATGGTCACTGCTTGTGGATGCTGAGCCCCCATACT
 CTATCCGAGTATGATCCTACCAGCCCTTCAGTGAAGCTTCGATGATGGGCTTACTGACCAACCTGGCA
 GACAGGGAGCTGGTTCACATGATCAACTGGCGAAGAGGGTCCAGGCTTGTGGATTGACCCCTCATG
 ATCAGGTCCACCTCTAGAATGTGCCTGGCTAGAGATCCTGATGATTGGTCTCGTCTGGCGCTCCATGGA
 GCACCCAGGGAAGCTACTGTTTGTCTCTAACTTGCTCTTGACAGGAACCAAGGAAAATGTGTAGAGGGC
 ATGGTGGAGATCTTCGACATGCTGCTGGCTACATCATCTCGGTTCCGCATGATGAATCTGCAGGGAGAGG
 AGTTTGTGTGCCTCAAATCTATTATTTGCTTAATTCTGGAGTGTACACATTTCTGTCCAGCACCTGAA
 GTCTCTGGAAGAGAAGGACCATATCCACCAGTCTGGACAAGATCACAGACACTTTGATCCACCTGATG
 GCCAAGGCAGGCCTGACCCTGCAGCAGCAGCACCAGCGGCTGGCCAGCTCCTCCTCATCTCTCCACA
 TCAGGCACATGAGTAACAAAGGCATGGAGCATCTGTACAGCATGAAGTGAAGAAGCTGGTCCCTCTA
 TGACCTGCTGCTGGAGATGCTGGACGCCACCGCCTACATGCGCCCACTAGCCGTGGAGGGGCATCCGTG
 GAGGAGACGGACAAAGCCACTTGGCCACTGCGGGCTCTACTTCATCGCATTCTTGCAAAGTATTACA
 TCACGGGGAGGCAAGGGTTTCCCTGCCACGGTC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC226004 representing NM_001122741
 Red=Cloning site Green=Tags(s)

MTMTLHTKASGMALLHQIQGNELEPLNRPQLKIPLERPLGEVYLDSSKPAVYNYPEGAAYEFNAAAAANA
 QVYQGTGLPYGPGSEAAAFGSNGLGGFPPLNSVSPSPLMLLHPPPQLSPFLQPHGQVVPYYLENEPSGYT
 VREAGPPAFYRPNSDNRRQGGRERLASTNDKGSMAKESAKETRYCAVCNDYASGYHYGVWSCEGCKAFFK
 RSIQGHNDYMCATNQCCTIDKNRRKSCQACRLRKCVEVGMKGGIRKDRRGRMLKHKRQRDDGEGRGEV
 GSAGDMRAANLWPSPLMIKRSKKNLALSLTADQMVSALLDAEPPILYSEYDPTPRPFSEASMMGLLTNLA
 DRELVHMINWAKRVPFVDLTLHDQVHLLLECAWLEILMIGLVWRSMEHPGKLLFAPNLLDRNQKCVGE
 MVEIFDMLLATSSRFMMNLQGEFVCLKSIIILLNSGVYTFLSSTLKSLEEKDHIHRVLDKITDTLIHLM
 AKAGLTQQQHQLAQLLLILSHIRHMSNKGMEHLYSMKCKNVVPLYDLLEMLDAHRLHAPTSRGGASV
 EETDQSHLATAGSTSSHSLQKYYITGEAEGFPATV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_001122741

ORF Size: 1785 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_001122741.1](#), [NP_001116213.1](#)

RefSeq ORF: 1788 bp

Locus ID: 2099

UniProt ID: [P03372](#)

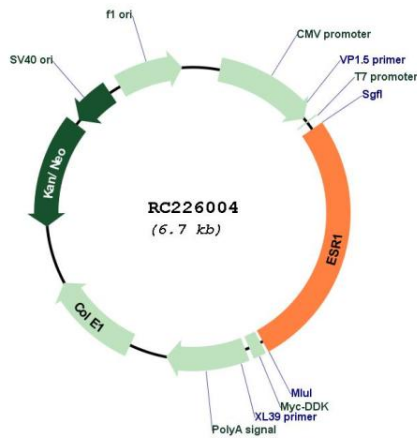
Cytogenetics: 6q25.1-q25.2

Protein Families: Druggable Genome, Nuclear Hormone Receptor, Transcription Factors

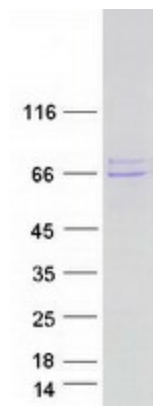
MW: 66 kDa

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]

Product images:



Circular map for RC226004



Coomassie blue staining of purified ESR1 protein (Cat# [TP326004]). The protein was produced from HEK293T cells transfected with ESR1 cDNA clone (Cat# RC226004) using MegaTran 2.0 (Cat# [TT210002]).