

## Product datasheet for **RG226004**

### 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:	TurboGFP
Symbol:	ESR1
Synonyms:	ER; Era; ESR; ESRA; ESTRR; NR3A1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG226004 representing NM\_001122741  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGACCATGACCCTCCACACAAAGCATCTGGGATGGCCCTACTGCATCAGATCCAAGGGAACGAGCTGG  
 AGCCCTGAACCGTCCGACAGCTCAAGATCCCCCTGGAGCGGCCCTGGGCGAGGTGTACCTGGACAGCAG  
 CAAGCCC GCCGTGTAACAACACCCGAGGGCGCCGCTACGAGTTCAACGCCGCGCCGCCCAACCGC  
 CAGGTCTACGGTCAGACCGCCCTCCCCTACGGCCCCGGTCTGAGGCTGCGGCGTTCCGGCTCCAACGGCC  
 TGGGGGTTTTCCCCCACTCAACAGCGTGTCTCCGAGCCCGCTGATGCTACTGCACCCGCCGCCGACGT  
 GTCGCCTTCTGCAGCCCCACGGCCAGCAGGTGCCCTACTACCTGGAGAACGAGCCAGCGGCTACACG  
 GTGCGCGAGGCGGCCGCCGCGCATTCTACAGGCCAAATTCAGATAATCGACGCCAGGTTGCCAGAGAAA  
 GATTGGCCAGTACCAATGACAAGGGAAGTATGGCTATGGAATCTGCCAAGGAGACTCGCTACTGTGCAGT  
 GTGCAATGACTATGCTTACAGGCTACCATTATGGAGTCTGGTCTGTGAGGGCTGCAAGGCCCTTCTCAAG  
 AGAAGTATTCAAGGACATAACGACTATATGTGTCCAGCCACCAACCAAGTGCACCATTGATAAAAAACAGGA  
 GGAAGAGCTGCCAGGCTGCCGGCTCCGCAATGCTACGAAGTGGGAATGATGAAAGTGGGATACGAAA  
 AGACCGAAGAGGAGGAGAATGTTGAAACACAAGCGCCAGAGAGATGATGGGAGGGCAGGGGTGAAGTG  
 GGGTCTGCTGGAGACATGAGAGCTGCCAACCTTTGGCCAAGCCGCTCATGATCAAACGCTCTAAGAAGA  
 ACAGCCTGGCCTTGTCCCTGACGGCCGACCAGATGGTCACTGCTTGTGGATGCTGAGCCCCCATACT  
 CTATCCGAGTATGATCCTACCAGCCCTCAGTGAAGCTTCGATGATGGGCTTACTGACCAACCTGGCA  
 GACAGGGAGCTGGTTCACATGATCAACTGGCGAAGAGGGTCCAGGCTTTGTGGATTGACCCCTCATG  
 ATCAGTCCACCTCTAGAATGTGCCTGGCTAGAGATCCTGATGATTGGTCTCGTCTGGCCTCCATGGA  
 GCACCCAGGGAAGCTACTGTTTGTCTCTAACTTGCTCTTGACAGGAACCAAGGAAAATGTGTAGAGGGC  
 ATGGTGGAGATCTTCGACATGCTGCTGGCTACATCATCTCGGTTCCGCATGATGAATCTGCAGGGAGAGG  
 AGTTTGTGTGCCTCAAATCTATTATTTGCTTAATTCTGGAGTGTACACATTTCTGTCCAGCACCTGAA  
 GTCTCTGGAAGAGAAGGACCATATCCACCGAGTCTGGACAAGATCACAGACACTTTGATCCACCTGATG  
 GCCAAGGCAGGCTGACCCTGCAGCAGCAGCACCAGCGGCTGGCCAGCTCCTCCTCATCTCTCCACA  
 TCAGGCACATGAGTAACAAAGGCATGGAGCATCTGTACAGCATGAAGTGAAGAAGCTGGTCCCTCTA  
 TGACCTGCTGCTGGAGATGCTGGACGCCACCGCTACATGCGCCCACTAGCCGTGGAGGGGCATCCGTG  
 GAGGAGACGGACAAAGCCACTTGGCCACTGCGGGCTCTACTTCATCGCATTCTTGCAAAGTATTACA  
 TCACGGGGGAGGCAGAGGTTTCCCTGCCACGGTC

**ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA**

**Protein Sequence:**

>RG226004 representing NM\_001122741  
 Red=Cloning site Green=Tags(s)

MTMTLHTKASGMALLHQIQGNELEPLNRPQLKIPLERPLGEVYLDSSKPAVYNYPEGAAYEFNAAAAANA  
 QVYQGTLPGYGPSEAAAFGSNGLGGFPPLNSVSPSPLMLLHPPPQLSPFLQPHGQVVPYYLENEPSGYT  
 VREAGPPAFYRPNSDNRRQGGRELRASNDKGSMAKESAKETRYCAVCNDYASGYHYGVWSCEGCKAFFK  
 RSIQGHNDYMCATNQCTIDKNRRKSCQACRLRKYEVGMMKGGIRKDRRGRMLKHKRQRDDGEGRGEV  
 GSAGDMRAANLWPSPLMIKRSKKNLALSLTADQMVSALLDAEPPILYSEYDPTRPFSEASMMGLLTNLA  
 DRELVHMINWAKRVPFVDTLHDQVHLLCAWLEILMIGLVWRSMEHPGKLLFAPNLLDRNQKCVGEV  
 MVEIFDMLLATSSRFMMNLQGEFVCLKSIIILLNSGVYTFLLSSTLKSLEEKDHIHRVLDKITDTLIHLM  
 AKAGLTLQQHQRLAQLLLILSHIRHMSNKGMEHLYSMKCKNVVPLYDLLEMLDAHRLHAPTSRGGASV  
 EETDQSHLATAGSTSSHSLQKYIITGEAEGFPATV

**TRTRPLE - GFP Tag - V**

**Restriction Sites:**

Sgfl-MluI



<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_001122741.1</a> , <a href="#">NP_001116213.1</a>
<b>RefSeq Size:</b>	6314 bp
<b>RefSeq ORF:</b>	1788 bp
<b>Locus ID:</b>	2099
<b>UniProt ID:</b>	<a href="#">P03372</a>
<b>Cytogenetics:</b>	6q25.1-q25.2
<b>Protein Families:</b>	Druggable Genome, Nuclear Hormone Receptor, Transcription Factors
<b>Gene Summary:</b>	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]