

Product datasheet for **RG213277**

Estrogen Receptor 1 (ESR1) (NM_000125) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Estrogen Receptor 1 (ESR1) (NM_000125) 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:

>RG213277 representing NM_000125
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGACCATGACCCTCCACACAAAGCATCCGGGATGGCCCTACTGCATCAGATCCAAGGGAACGAGCTGG
 AGCCCTGAACCGTCCGACAGCTCAAGATCCCCCTGGAGCGGCCCTGGGCGAGGTGTACCTGGACAGCAG
 CAAGCCC GCCGTGTACAACCTACCCGAGGGCGCCGCTACGAGTTCAACGCCGCGCCGCCGCAACCGG
 CAGGTCTACGGTACAGCCGGCCTCCCCTACGGCCCCGGTCTGAGGCTGCGGCGTTCCGGCTCCAACGGCC
 TGGGGGTTTCCCCCACTCAACAGCGTGTCTCCGAGCCCGCTGATGCTACTGCACCCGCCGCCGACGT
 GTCGCCTTCTGCAGCCCCACGGCCAGCAGGTGCCCTACTACCTGGAGAACGAGCCAGCGGCTACACG
 GTGCGCGAGGCGGCCGCCGCGCATTCTACAGGCCAAATTCAGATAATCGACGCCAGGTTGCAGAGAAA
 GATTGGCCAGTACCAATGACAAGGGAAGTATGGCTATGGAATCTGCCAAGGAGACTCGCTACTGTGCAGT
 GTGCAATGACTATGCTTACAGGCTACCATTATGGAGTCTGGTCTGTGAGGGCTGCAAGGCCTTCTCAAG
 AGAAGTATTCAAGGACATAACGACTATATGTGTCCAGCCACCAACCAAGTGCACCATTGATAAAAACAGGA
 GGAAGAGCTGCCAGGCCTGCCGGCTCCGCAATGCTACGAAGTGGGAATGATGAAAGGTGGGATACGAAA
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 GGGTCTGCTGGAGACATGAGAGCTGCCAACCTTTGGCCAAGCCCGCTCATGATCAAACGCTCTAAGAAGA
 ACAGCCTGGCCTTGTCCCTGACGGCCGACCAGATGGTCACTGCTTGTGGATGCTGAGCCCCCATACT
 CTATCCGAGTATGATCCTACCAGCCCTTCACTGAAGCTTCGATGATGGGCTTACTGACCAACCTGGCA
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 ATCAGGTTCCACCTCTAGAATGTGCCTGGCTAGAGATCCTGATGATTGGTCTCGTCTGGCCTCCATGGA
 GCACCCAGGGAAGCTACTGTTTGTCTCTAACTTGCTCTTGACAGGAACCAAGGAAAATGTGTAGAGGGC
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 GTCTCTGGAAGAGAAGGACCATATCCACCGAGTCTGGACAAGATCACAGACACTTTGATCCACCTGATG
 GCCAAGGCAGGCCTGACCCTGCAGCAGCAGCACCAGCGGCTGGCCAGCTCCTCCTCATCTCTCCACA
 TCAGGCACATGAGTAACAAAGGCATGGAGCATCTGTACAGCATGAAGTGAAGAAGCTGGTCCCTCTA
 TGACCTGCTGCTGGAGATGCTGGACGCCACCGCCTACATGCGCCCACTAGCCGTGGAGGGGCATCCGTG
 GAGGAGACGGACAAAGCCACTTGGCCACTGCGGGCTCTACTTCATCGCATTCTTGCAAAGTATTACA
 TCACGGGGGAGGCAGAGGGTTTCCCTGCCACGGTC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG213277 representing NM_000125
 Red=Cloning site Green=Tags(s)

MTMTLHTKASGMALLHQIQGNELEPLNRPQLKIPLERPLGEVYLDSSKPAVYNYPEGAAYEFNAAAAANA
 QVYQGTLPGYGPSEAAAFGSNGLGGFPPLNSVSPSPLMLLHPPPQLSPFLQPHGQVVPYYLENEPSGYT
 VREAGPPAFYRPNSDNRRQGGRERLASTNDKGSMAKESAKETRYCAVCNDYASGYHYGVWSCEGCKAFFK
 RSIQGHNDYMCATNQCTIDKNRRKSCQACRLRKYEVGMMKGGIRKDRRGGRMLKHKRQRDDGEGRGEV
 GSAGDMRAANLWPSPLMIKRSKKNLALSLTADQMVSALLDAEPPILYSEYDPTRPFSEASMMGLLTNLA
 DRELVHMINWAKRVPFVDTLHDQVHLLCAWLEILMIGLVWRSMEHPGKLLFAPNLLDRNQKCVGEV
 MVEIFDMLLATSSRFMMNLQGEFVCLKSIILLNSGVYTFLSSTLKSLEEKDHIHRVLDKITDITLIHLM
 AKAGLTLQQHQRLAQLLLILSHIRHMSNKGMEHLYSMKCKNVVPLYDLLLLLEMLDAHRLHAPTSRGGASV
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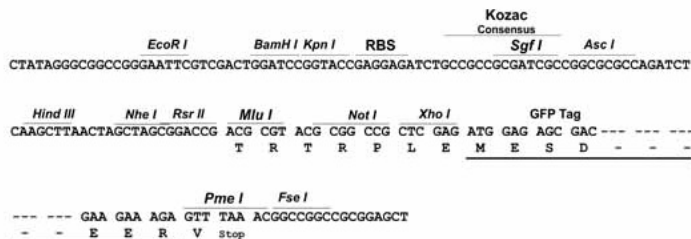
TRTRPLE – GFP Tag – V

Restriction Sites:

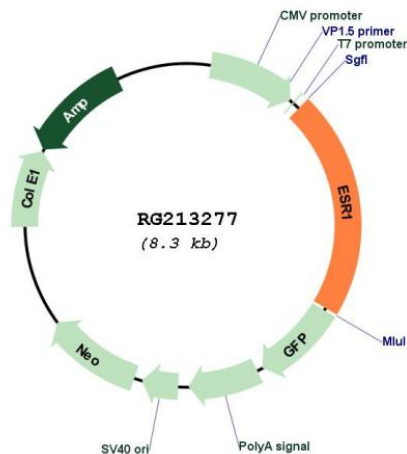
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM_000125
 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:	<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_000125.2 , NP_000116.2
RefSeq Size:	6456 bp
RefSeq ORF:	1788 bp
Locus ID:	2099
UniProt ID:	P03372
Cytogenetics:	6q25.1-q25.2
Domains:	HOLI, Oest_recep, zf-C4
Protein Families:	Druggable Genome, Nuclear Hormone Receptor, Transcription Factors
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]