

Product datasheet for **RC213277**

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

Product data:

Product Type:	Expression Plasmids
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)



[View online »](#)

ORF Nucleotide Sequence:

>RC213277 representing NM_000125.

Blue=ORF Red=Cloning site Green=Tag(s)

```
GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCCGCATCGCC
ATGACCATGACCTCCACACCAAGCATCTGGGATGGCCCTACTGCATCAGATCCAAGGGAACGAGCTG
GAGCCCTGAACCGTCCGAGCTCAAGATCCCCCTGGAGCGGCCCTGGCGGAGGTGTACCTGGACAGC
AGCAAGCCCGCCGTGTACAACACCCCGAGGGCGCCGCTACGAGTTCAACGCCGCGGCCGCCCAAC
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GATTTGACCTCCATGATCAGGTCCACCTTCTAGAATGTGCTGGCTAGAGATCCTGATGATTGGTCTC
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GACACTTTGATCCACCTGATGGCCAAGGCAGGCTGACCTGCAGCAGCAGCAGCAGCGGCTGGCCAG
CTCCTCTCATCTCTCCACATCAGGCACATGAGTAACAAAGGCATGGAGCATCTGTACAGCATGAAG
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TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
```

Protein Sequence:

>Peptide sequence encoded by RC213277

Blue=ORF Red=Cloning site Green=Tag(s)

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MTMTLHTKASGMALLHQIQGNELEPLNRPQLKIPLERPLGEVYLDSSKPAVYNYPEGAAYEFNAAAAAN
AQVYQGTGLPYGPGSEAAAFGSNGLGGFPPLNSVSPSPLMLLHPPPQLSPFLQPHGQQVPYYLENEPSG
YTVREAGPPAFYRPNSDNRRQGGRELASTNDKGSMAESAKETRYCAVCNDYASGYHYGVWSCEGCKA
FFKRSIQGHNDYMCPTNQCTIDKNRRKSCQACRLRKYEVGMMKGIRKDRRGGRMLKHKRQRDDGEG
RGEVGSAGDMRAANLWPSPLMIKRSKNSLALSLTADQMVSAALLDAEPPILYSEYDPTPRFSEASMMGL
LTNLADRELVHMINWAKRVPFVDLTLHDQVHLLCAWLEILMIGLVWRSMEHPGKLLFAPNLLDRNQ
GKCVGMEVIFDMLLATSSRFMMNLQGEFVCLKSIILLNSGVYTFLLSSTLKSLEEKDHIHRVLDKIT
DTLIHLMAKAGLTQQHQRLAQLLLILSHIRHMSNKGMEHLYSMKCKNVVPLYDLLLEMLDAHRLHAP
TSRGGASVEETDQSHLATAGSTSSHSLQKYITGEAEGFPATV
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```

Recombinant protein using RC213277 also available, [TP313277](#)

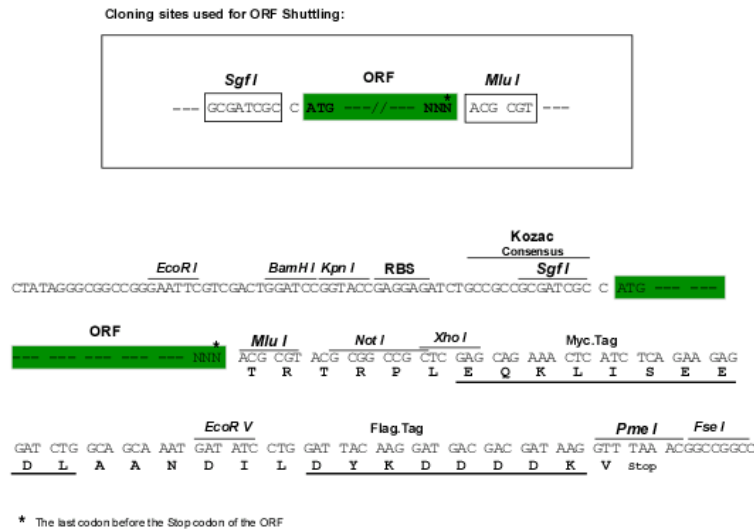
Chromatograms:

https://cdn.origene.com/chromatograms/mg3787_b02.zip

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



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:

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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq Size: 6456 bp

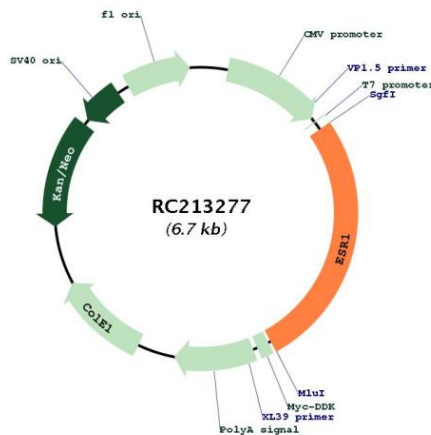
RefSeq ORF: 1788 bp

Locus ID: 2099

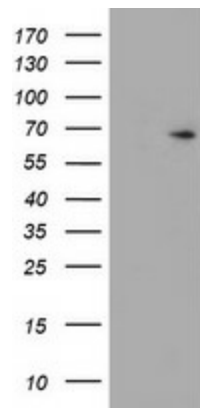
UniProt ID: [P03372](#)

Cytogenetics:	6q25.1-q25.2
Domains:	HOLI, Oest_recep, zf-C4
Protein Families:	Druggable Genome, Nuclear Hormone Receptor, Transcription Factors
MW:	66.2 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]

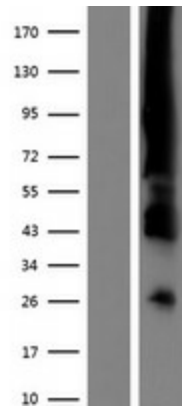
Product images:



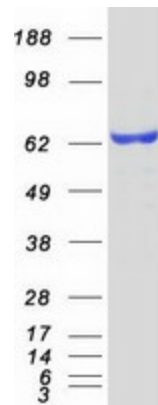
Circular map for RC213277



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY ESR1 (Cat# RC213277, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-ESR1 (Cat# [TA503759]). Positive lysates [LY400046] (100ug) and [LC400046] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY426553]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC226003] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ESR1 protein (Cat# [TP313277]). The protein was produced from HEK293T cells transfected with ESR1 cDNA clone (Cat# RC213277) using MegaTran 2.0 (Cat# [TT210002]).