

## Product datasheet for **RC218233**

### Estrogen Related Receptor gamma (ESRRG) (NM\_001438) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Estrogen Related Receptor gamma (ESRRG) (NM_001438) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Estrogen Related Receptor gamma
Synonyms:	ERR-gamma; ERR3; ERRg; ERRgamma; NR3B3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC218233 representing NM\_001438  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGATTCGGTAGAACTTGCCTTCCTGAATCTTTTTCCCTGCACTACGAGGAAGAGCTTCCTGCAGAA  
 TGCAAACAAGATCGACACATTGATTCCAGCTGTTTCGTCTTCATCAAGACGGAACCTCCAGCCAGC  
 CTCCTGACGGACAGCGTCAACCACACAGCCCTGGTGGCTCTTCAGACGCCAGTGGGAGCTACAGTTCA  
 ACCATGAATGGCCATCAGAACGGACTTGACTCGCCACCTCTACCCCTTGCTCCTATCCTGGGAGGTA  
 GTGGGCTGTGAGGAACTGTATGATGACTGCTCCAGCACCATTGTTGAAGATCCCAGACCAAGTGTGA  
 ATACATGCTCAACTCGATGCCAAGAGACTGTGTTTAGTGTGGTGACATCGCTTCTGGGTACCACTAT  
 GGGGTAGCATCATGTGAAGCCTGCAAGGCATTCTCAAGAGGACAATTCAAGGAATATAGAATACAGCT  
 GCCCTGCCACGAATGAATGTAAATCACAAGCGCAGACGTAATCCTGCCAGGCTTGCCGCTTCATGAA  
 GTGTTTAAAAGTGGGCATGCTGAAAGAAGGGGTGCGTCTTGACAGAGTACGTGGAGTTCGGCAGAAGTAC  
 AAGCGCAGGATAGATGCGGAGAACAGCCATACCTGAACCCTCAGCTGGTTCAGCCAGCCAAAAGCCAT  
 ATAACAAGATTGTCTCACATTTGTTGGTGGCTGAACCGGAGAAGATCTATGCCATGCCTGACCCACTGT  
 CCCCAGACGTGACATCAAAGCCCTCACTACACTGTGTGACTTGGCCGACCAGAGTTGGTGGTTATCATT  
 GGATGGGCGAAGCATATCCAGGCTTCTCCACGCTGTCCCTGGCGGACCAGATGAGCCTTCTGCAGAGTG  
 CTTGGATGGAAATTTTGATCCTTGGTGTGCTATACCGTCTCTTTCATTTGAGGATGAACCTGTCTATGC  
 AGACGATTATAAATGGACGAAGACCAGTCCAAATTAGCAGGCCTTCTTGATCTAAATAATGCTATCCTG  
 CAGCTGGTAAAGAAATACAAGAGCATGAAGCTGGAAAAAGAAGAAATTTGTCACCCTCAAAGCTATAGCTC  
 TTGCTAATTCAGACTCCATGCACATAGAAGATGTTGAAGCCGTTGAGAAGCTTCAGGATGCTTACATGA  
 AGCGCTGCAGGATTATGAAGCTGGCCAGCACATGGAAGACCCTCGTCGAGCTGGCAAGATGCTGATGACA  
 CTGCCACTCCTGAGGCAGACCTCTACCAAGCCGTGCAGCATTTCTACAACATCAAACCTAGAAGGCAAAG  
 TCCCAATGCACAACTTTTTTTGGAAATGTTGGAGGCCAAGGTC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC218233 representing NM\_001438  
 Red=Cloning site Green=Tags(s)

MDSVELCLPEFSLHYEELPCRMSNKDRHIDSSCSF IKTEPSSPASL TDSVNHHSPPGSSDASGSYSS  
 TMNGHQNLDSPLYP SAPI LGGSGPVRKLYDDCSSTIVEDPQTKCEYMLNSMPKRLCLVCGDIASGYHY  
 GVASCEACKAFFKRTIQGNIEYSCPATNECEITKRRRKSCQACRFMKCLKVGM LKEGVRLDRVRRGGRQKY  
 KRRIDAENSPYLNQLVQPAKKPYNKIVSHLLVAEPEKIYAMPDPTVPDSIKAL TTLCDLADRELVVII  
 GWAKHIPGFSTLSLADQMSLLQSAWMEILILGVVYRSLSFEDEL VYADDYIMDEDQSKLAGLLDLNNAI L  
 QL VKKYKSMKLEKEEFVTLKAIALANSDSMHIEDVEAVQKLQDVLHEALQDYEAGQHMEDPRRAGKMLMT  
 LPLLRQTSTKAVQHFYNIKLEGVPMHKLFLFLEMLEAKV

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6048\\_b04.zip](https://cdn.origene.com/chromatograms/mk6048_b04.zip)

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_001438

**ORF Size:** 1374 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\\_001438.4](#)

**RefSeq Size:** 5253 bp

**RefSeq ORF:** 1377 bp

**Locus ID:** 2104

**UniProt ID:** [P62508](#)

**Cytogenetics:** 1q41

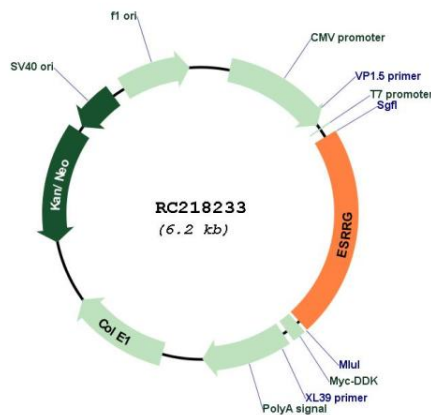
**Domains:** HOLI, zf-C4

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

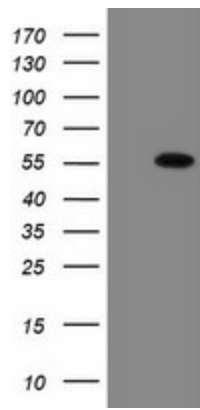
**MW:** 51.1 kDa

**Gene Summary:** This gene encodes a member of the estrogen receptor-related receptor (ESRR) family, which belongs to the nuclear hormone receptor superfamily. All members of the ESRR family share an almost identical DNA binding domain, which is composed of two C4-type zinc finger motifs. The ESRR members are orphan nuclear receptors; they bind to the estrogen response element and steroidogenic factor 1 response element, and activate genes controlled by both response elements in the absence of any ligands. The ESRR family is closely related to the estrogen receptor (ER) family. They share target genes, co-regulators and promoters, and by targeting the same set of genes, the ESRRs seem to interfere with the ER-mediated estrogen response in various ways. It has been reported that the family member encoded by this gene functions as a transcriptional activator of DNA cytosine-5-methyltransferases 1 (Dnmt1) expression by direct binding to its response elements in the DNMT1 promoters, modulates cell proliferation and estrogen signaling in breast cancer, and negatively regulates bone morphogenetic protein 2-induced osteoblast differentiation and bone formation. Multiple alternatively spliced transcript variants have been identified, which mainly differ at the 5' end and some of which encode protein isoforms differing in the N-terminal region. [provided by RefSeq, Aug 2011]

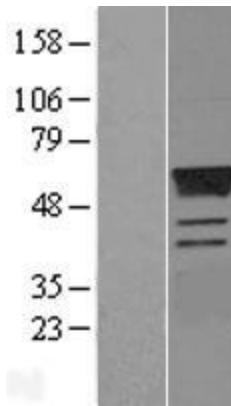
**Product images:**



Circular map for RC218233



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY ESRRG (Cat# RC218233, 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-ESRRG (Cat# [TA505080]). Positive lysates [LY400557] (100ug) and [LC400557] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY400557]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC218233 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ESRRG protein (Cat# [TP318233]). The protein was produced from HEK293T cells transfected with ESRRG cDNA clone (Cat# RC218233) using MegaTran 2.0 (Cat# [TT210002]).