

## Recombinant Human ESRRG

**Cat. No.** ESRRG-28703TH    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| <b>Product Overview</b> | Recombinant full length Human Estrogen Related Receptor gamma with N terminal proprietary tag; predicted MWt: 74.73 kDa including the tag.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Source</b>           | Wheat Germ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>ProteinLength</b>    | 442 amino acids                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Description</b>      | <p>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</p> |

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|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                 | identified, which mainly differ at the 5' end and some of which encode protein isoforms differing in the N-terminal region.                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Molecular Weight</b>         | 74.730kDa inclusive of tags                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Tissue specificity</b>       | Expressed in the heart, kidney, brain, lung, bone marrow, adrenal gland, trachea, spinal cord and thyroid gland.                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Form</b>                     | Liquid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Purity</b>                   | Proprietary Purification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Storage buffer</b>           | pH: 8.00 Constituents: 0.79% Tris HCl, 0.3% Glutathione                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Storage</b>                  | Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles.                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Sequences of amino acids</b> | <p>MSNKDRHIDSSCSSFIKTEPSSPASLTDSVNHHSPPGGS SDASGSYSSTMNGHQNG</p> <p>LDSPPLYPSAPILGGSGPVRKLY DDCSSTIVEDPQTKCEYMLNSMPKRLCLVCGDIA</p> <p>SGYHYG VASCEACKAFFKRTIQGNIEYSCPATNECEITKRRRKSCQ ACRFMKCLKV</p> <p>GMLKEGVRLDRVRGGRQKYKRRIDAENSPY LNPQLVQPAKKPLLWSDPADNKIVS</p> <p>HLLVAEPEKIYAMPD PTAPDSDIKALTTLCDLADRELVIIGWAKHIPGFSTLSL ADQ</p> <p>MSLLQSAWMEILILGVVYRSLSFEDLVYADDYIMDE DQSKLAGLLDLNNAILQLVKK</p> <p>YKSMKLEKEEFVTLKAIAL ANSDSMHIEDVEAVQKLQDVLHEALQDYEAGQHMEDP</p> <p>RRA GKMLMTLPLLRQTSTKAVQHFYNIKLEGKVPMHKLLLEML EAKV</p> |
| <b>Sequence Similarities</b>    | Belongs to the nuclear hormone receptor family. NR3 subfamily. Contains 1 nuclear receptor DNA-binding domain.                                                                                                                                                                                                                                                                                                                                                                                                                      |

## GENE INFORMATION

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|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>           | ESRRG estrogen-related receptor gamma [ Homo sapiens ]                                                                                                                         |
| <b>Official Symbol</b>     | ESRRG                                                                                                                                                                          |
| <b>Synonyms</b>            | ESRRG; estrogen-related receptor gamma;                                                                                                                                        |
| <b>Gene ID</b>             | 2104                                                                                                                                                                           |
| <b>mRNA Refseq</b>         | NM_001243505                                                                                                                                                                   |
| <b>Protein Refseq</b>      | NP_001230434                                                                                                                                                                   |
| <b>MIM</b>                 | 602969                                                                                                                                                                         |
| <b>Uniprot ID</b>          | P62508                                                                                                                                                                         |
| <b>Chromosome Location</b> | 1q41                                                                                                                                                                           |
| <b>Pathway</b>             | Gene Expression, organism-specific biosystem; Generic Transcription Pathway, organism-specific biosystem; Nuclear Receptor transcription pathway, organism-specific biosystem; |
| <b>Function</b>            | AF-2 domain binding; metal ion binding; receptor activity; retinoic acid receptor activity; sequence-specific DNA binding;                                                     |

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