

## Recombinant Human ESR1, His-tagged

**Cat. No.** ESR1-117H    **Lot. No.** (See product label)

### SPECIFICATION

**Product Overview**      Recombinant Human Estrogen Receptor is produced by E. coli expression system. The target protein is expressed with sequence (Met1-Gln116) of Human ESR1 fused with a His tag at the N-terminus.

**Species**                      Human

**Source**                        E.coli

**ProteinLength**              1-116 a.a.

**Description**                Estrogen Receptor is a major ligand-activated transcription factor belonging to the nuclear hormone receptor superfamily. Estrogen Receptor is composed of several domains important for hormone binding, DNA binding, and activation of transcription. The protein localizes to the nucleus where it may form a homodimer or a heterodimer with estrogen receptor 2. Estrogen and its receptors are essential for sexual development and reproductive function, but they also play a role in other tissues such as bone. Estrogen receptors are also involved in pathological processes including breast cancer, endometrial cancer, and osteoporosis. Alternative splicing results in several transcript variants, which differ in their 5' UTRs and use different promoters.

**Form**                            Lyophilized from a 0.2 μM filtered solution of 20mM PB, 150mM NaCl, pH 7.2

**AA Sequence**                MGSSHHHHHSSGLVPRGSHMTMTLHTKASGMALLHQIQGNELEPLNRPQLKIPLE  
RPLGEVYLD SSKPAVYNYPEGAAAYEFNAAAAANAQVYGQTGLPYGPGSEAAAFGS  
NGLGGFPPLNSVSPSPLML LHPPPQ

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<b>Endotoxin</b>	Less than 0.1 ng/μg (1 IEU/μg).
<b>Purity</b>	Greater than 95% as determined by SEC-HPLC and reducing SDS-PAGE.
<b>Storage</b>	Lyophilized protein should be stored at < -20°C, though stable at room temperature for 3 weeks. Reconstituted protein solution can be stored at 4-7°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Reconstitution</b>	Always centrifuge tubes before opening. Do not mix by vortex or pipetting. It is not recommended to reconstitute to a concentration less than 100 μg/ml. Dissolve the lyophilized protein in 1X PBS. Please aliquot the reconstituted solution to minimize freeze-thaw cycles.

## GENE INFORMATION

<b>Gene Name</b>	<a href="#">ESR1 estrogen receptor 1 [ Homo sapiens ]</a>
<b>Official Symbol</b>	ESR1
<b>Synonyms</b>	ESR1; estrogen receptor 1; ESR; estrogen receptor; Era; NR3A1; ER-alpha; estradiol receptor; estrogen nuclear receptor alpha; estrogen receptor alpha delta 4 +49 isoform; nuclear receptor subfamily 3 group A member 1; estrogen receptor alpha 3*,4,5,6,7*/822 isoform; estrogen receptor alpha delta 4*,5,6,7*/654 isoform; estrogen receptor alpha delta 4*,5,6,7,8*/901 isoform; estrogen receptor alpha delta 3*,4,5,6,7*/819-2 isoform; estrogen receptor alpha delta 3*,4,5,6,7*,8*/941 isoform; ER; ESRA; DKFZp686N23123;
<b>Gene ID</b>	<a href="#">2099</a>
<b>mRNA Refseq</b>	<a href="#">NM_000125</a>

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<b>Protein Refseq</b>	NP_000116
<b>UniProt ID</b>	P03372
<b>Chromosome Location</b>	6q24-q27
<b>Pathway</b>	Androgen Receptor Signaling Pathway, organism-specific biosystem; Endocrine and other factor-regulated calcium reabsorption, organism-specific biosystem; Endocrine and other factor-regulated calcium reabsorption, conserved biosystem; Estrogen signaling pathway, organism-specific biosystem; FOXA1 transcription factor network, organism-specific biosystem; FOXM1 transcription factor network, organism-specific biosystem; Gene Expression, organism-specific biosystem;
<b>Function</b>	DNA binding; beta-catenin binding; chromatin binding; core promoter sequence-specific DNA binding; enzyme binding; enzyme binding; estrogen receptor activity; estrogen receptor activity; estrogen response element binding; hormone binding; identical protein binding; ligand-activated sequence-specific DNA binding RNA polymerase II transcription factor activity; metal ion binding; nitric-oxide synthase regulator activity; protein binding; protein complex binding; receptor activity; sequence-specific DNA binding; sequence-specific DNA binding transcription factor activity; sequence-specific DNA binding transcription factor activity; steroid binding; steroid hormone receptor activity; steroid hormone receptor activity; transcription factor binding; type 1 metabotropic glutamate receptor binding; zinc ion binding;

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