Active Recombinant Human ESR1, His-tagged

Cat. No. ESR1-8487H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human ESR1, fused with His tag, was expressed in Sf21 Cells.
Species	Human
Source	Sf21 Cells
ProteinLength	1-595 aa
Description	Several members of the nuclear receptor family are directly associated with human malignancies including breast cancer, prostate cancer and leukemia. The pathogenesis of each of these diseases is underpinned by the activities of a member of the superfamily; estrogen receptor-alpha (ER alpha) in breast cancer, androgen receptor (AR) in prostate cancer, and retinoic acid receptor alpha (RAR alpha) in acute promyelocytic leukemia . Estrogen receptors (ER) are members of the superfamily of nuclear hormone receptors whose activity is required for the normal function of the female reproductive system. Two isoforms of estrogen receptor (ER a and ER ?) have been described. They function as ligand-dependent transcriptional activators . The biological functions downstream of ER result from altered expression of direct transcriptional targets as well as secondary effects mediated by biological activities of direct targets. In the mammary gland, estrogen receptors regulate normal epithelial cell development and differentiation through their well-documented effects on transcription . Estrogens have long been known to have mitogenic functions in breast cancer cell lines and in breast tumors . Selective estrogen receptor modulatory compounds (SERMs), which bind directly to ER, can block the growth stimulatory

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	function of estrogens.
Form	20 mM Tris-Cl, pH 7.9, 20% Glycerol, 100 mM KCl, 1 mM DTT and 0.2 mM EDTA
Bio-activity	1 unit is equal to 1 ng of purified protein. 20-100 units are sufficient for an in vitro transcription assay and 100 units are sufficient for a protein-protein interaction assay.
AA Sequence	MTMTLHTKAS GMALLHQIQG NELEPLNRPQ LKIPLERPLG EVYLDSSKPA VYNYPEGAAY EFNAAAAANA QVYGQTGLPY GPGSEAAAFG SNGLGGFPPL NSVSPSPLML LHPPPQLSPF LQPHGQQVPY YLENEPSGYT VREAGPPAFY RPNSDNRRQG GRERLASTND KGSMAMESAK ETRYCAVCND YASGYHYGVW SCEGCKAFFK RSIQGHNDYM CPATNQCTID KNRRKSCQAC RLRKCYEVGM MKGGIRKDRR GGRMLKHKRQ RDDGEGRGEV GSAGDMRAAN LWPSPLMIKR SKKNSLALSL TADQMVSALL DAEPPILYSE YDPTRPFSEA SMMGLLTNLA DRELVHMINW AKRVPGFVDL TLHDQVHLLE CAWLEILMIG LVWRSMEHPG KLLFAPNLLL DRNQGKCVEG MVEIFDMLLA TSSRFRMMNL QGEEFVCLKS IILLNSGVYT FLSSTLKSLE EKDHIHRVLD KITDTLIHLM AKAGLTLQQQ HQRLAQLLLI LSHIRHMSNK GMEHLYSMKC KNVVPLYDLL LEMLDAHRLH APTSRGGASV EETDQSHLAT AGSTSSHSLQ KYYITGEAEG FPATV
Purity	>95% as determined by SDS-PAGE
Storage	-80 °C
Concentration	200 μg/ml
Shipping	Dry Ice

GENE INFORMATION

Gene Name	ESR1 estrogen receptor 1 [Homo sapiens]

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Official Symbol	ESR1
Synonyms	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;
Gene ID	2099
mRNA Refseq	NM_000125
Protein Refseq	NP_000116
UniProt ID	P03372
Chromosome Location	6q24-q27
Pathway	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;
Function	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;

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	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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