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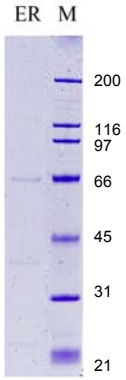
ER (Estrogen Receptor)

Catalog Reference	Vial Size		Lot Number	Molecular Mass	Accession
P1057-01	4,000 units (ng)	☐	102809XY	64 kDa	NM_000125
P1057-02	10,000 units (ng)	☐			

Storage conditions:
Store at -80 °C

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 (1). Estrogen receptors (ER) are members of the superfamily of nuclear hormone receptors (2, 3) whose activity is required for the normal function of the female reproductive system. Two isoforms of estrogen receptor (ER α and ER β) have been described. They function as ligand-dependent transcriptional activators (4). 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 (5, 6). Estrogens have long been known to have mitogenic functions in breast cancer cell lines and in breast tumors (7). Selective estrogen receptor modulatory compounds (SERMs), which bind directly to ER, can block the growth stimulatory function of estrogens (8).



Source:
Recombinant His tagged ER was expressed in a baculovirus system and purified by affinity and FPLC chromatography.

Applications:
ER has been applied in DNA and protein-protein interaction assays. **For Research Use Only.**

Quality Control:
The purified recombinant protein is greater than 90% homogeneous and based on SDS-PAGE analysis.

Unit Definition:
1 unit is equal to 1 nanogram 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.

Concentration:
0.2 mg/ml (in 1x dilution buffer A)

Reagents Supplied:
1x dilution buffer A: 20 mM Tris-Cl (pH 8.0), 20% Glycerol, 100 mM KCl, 1 mM DTT and 0.2 mM EDTA

References:
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2. Mangelsdorf et al., (1998) Cell 83, 835-839
3. Tsai and O`Malley, (1994) Annu. Rev. Biochem. 63, 451-486
4. McDonnell and Norris, (2002) Science 296, 1642-1644
5. Nilsson et al., (2001) Physiol. Rev. 81, 1535-1565
6. Couse and Korach, (1999) Endocr. Rev. 20, 358-417
7. Gruber et al., (2002) N. Engl. J. Med. 346, 340-352
8. McDonnell et al., (2002) Am. J. Cardiol. 90, 35F-43F