CELL APPLICATIONS, INC.

Phospho Estrogen Receptor-β (Ser87) Polyclonal Antibody

Cat. No. CC1019

Applications:	**WB, IP, IHC**
Detected MW:	**60 kDa**
Species & Reactivity:	**human, mouse, rat**
Isotype:	**Rabbit IgG**

BACKGROUND

Estrogen receptor (ER) family contains two members: ER-α and ER-β. Both ER-α and ER-β are normally present in the mammary gland and mediate the actions of estrogens. Due to alternative RNA splicing, several ER isoforms are known to exist. At least three ER-α and five ER-β isoforms have been identified.[1] ER-α and ER-β show significant overall sequence homology, and both are composed of five domains. Through its estrogen-independent and estrogen-dependent activation domains (AF-1 and AF-2, respectively), ERs regulate transcription by recruiting coactivator proteins and interacting with general transcriptional machinery. ER-α and ER-β have both overlapping and distinct biological functions and cellular distributions, regulate separate sets of genes, and can oppose each other's actions at some genes.[2] ER-α appears to play a predominant role in cell proliferation, and ER-β is suggested to be antiproliferative.[3]

In the absence of hormone, estrogen receptors are largely located in the cytosol. Hormone binding to the receptor triggers a number of events starting with migration of the receptor from the cytosol into the nucleus, dimerization of the receptor, and subsequently binding of the receptor dimer to specific sequences of DNA known as hormone response elements. The DNA/receptor complex then recruits other proteins which are responsible for the transcription of downstream DNA expression, resulting in a change in cell function. Phosphosphorylation of ERs at key amino acid residues is mediated by various signaling pathways, including the MAP kinase and Akt pathways, and play important roles in regulation of ER function. Phosphorylation of both Ser87 and Ser105 may be mediated by MAP kinase pathway activation, leading to the recruitment of SRC-1.[4]

References:

1. Nilsson, S. et al: Physiol Rev 81:1535–65, 2001.
2. Tremblay, G. B. et al: Mol Endocrinol. 11: 353-365, 1997.
3. Mathews, J & Gustafsson, J. A. : Mol. Interv. 3:281-92, 2003.
4. Tremblay, A. et al: Mol Cell 3, 513–519, 1999.

TECHNICAL INFORMATION

Source:
Affinity purified Phospho-Estrogen Receptor-β (Ser87) antibody is a rabbit polyclonal antibody raised against the epitope surrounding and including Ser87 of human ER-β sequence.

Specificity and Sensitivity:
This antibody detects endogenous phospho-human, mouse and rat ER-β proteins.

Storage Buffer: PBS and 30% glycerol

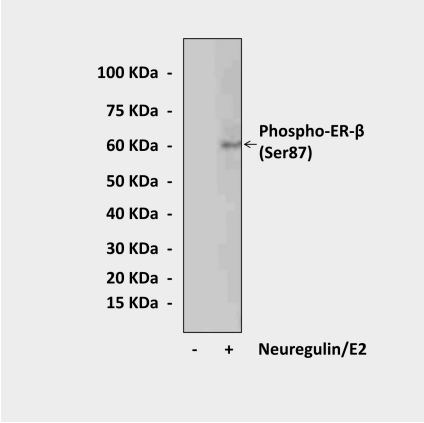
Storage:
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

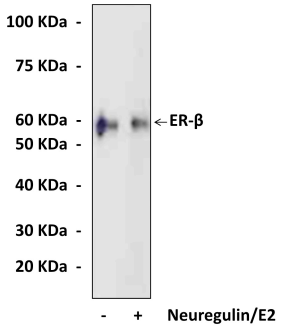
APPLICATIONS

Application:	*Dilution:
WB	1:1000
IP	n/d
IHC (Paraffin)	n/d
ICC	n/d
FACS	n/d

**Optimal dilutions must be determined by end user.*

QUALITY CONTROL DATA





T47D cells were stimulated with neuregulin/E2 and subjected to Western blot analysis using Phospho-Estrogen Receptor-β (Ser87) polyclonal antibody **(Top)**, or Estrogen Receptor-β antibody **(Bottom)**.