

Store at  
-20°C  
#49757

# Estrogen Receptor $\alpha$ Activation Antibody Sampler Kit



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1 Kit (3 x 20 microliters)

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Estrogen Receptor $\alpha$ (D8H8) Rabbit mAb	8644	20 $\mu$ l	66 kDa	Rabbit IgG
Phospho-Estrogen Receptor $\alpha$ (Ser118) (16J4) Mouse mAb	2511	20 $\mu$ l	66 kDa	Mouse IgG2b
Phospho-Estrogen Receptor $\alpha$ (Ser167) (D5W3Z) Rabbit mAb	64508	20 $\mu$ l	66 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 $\mu$ l		Goat
Anti-mouse IgG, HRP-linked Antibody	7076	100 $\mu$ l		Horse

Please visit [cellsignal.com](http://cellsignal.com) for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

## Description

The Estrogen Receptor  $\alpha$  Activation Antibody Sampler Kit provides an economical means of detecting the activation of estrogen receptor  $\alpha$  using phospho-specific and control antibodies. This kit includes enough antibodies to perform two western blot experiments with each primary antibody.

## Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at  $-20^{\circ}\text{C}$ . *Do not aliquot the antibodies.*

## Background

Estrogen receptor  $\alpha$  (ER $\alpha$ ), a member of the steroid receptor superfamily, contains highly conserved DNA binding and ligand binding domains (1). Through its estrogen-independent and estrogen-dependent activation domains (AF-1 and AF-2, respectively), ER $\alpha$  regulates transcription by recruiting coactivator proteins and interacting with general transcriptional machinery (2). Phosphorylation at multiple sites provides an important mechanism to regulate ER $\alpha$  activity (3-5). Ser104, 106, 118, and 167 are located in the amino-terminal transcription activation function domain AF-1, and phosphorylation of these serine residues plays an important role in regulating ER $\alpha$  activity. Ser118 may be the substrate of the transcription regulatory kinase CDK7 (5). Ser167 may be phosphorylated by p90RSK and Akt (4,6). According to the research literature, phosphorylation at Ser167 may confer tamoxifen resistance in breast cancer patients (4).

## Background References

1. Mangelsdorf, D.J. et al. (1995) *Cell* 83, 835-9.
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3. Chen, D. et al. (1999) *Mol Cell Biol* 19, 1002-15.
4. Campbell, R.A. et al. (2001) *J Biol Chem* 276, 9817-24.
5. Chen, D. et al. (2000) *Mol Cell* 6, 127-37.
6. Joel, P.B. et al. (1998) *Mol Cell Biol* 18, 1978-84.

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