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#5587

Phospho-Estrogen Receptor α (Ser167) (D1A3) Rabbit mAb

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

Applications: W	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 66	Source/Isotype: Rabbit IgG	UniProt ID: #P03372	Entrez-Gene Id: 2099
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Product Usage Information	Application Western Blotting	Dilution 1:1000
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C . Do not aliquot the antibody.	
Specificity/Sensitivity	Phospho-Estrogen Receptor α (Ser167) (D1A3) Rabbit mAb detects endogeneous levels of ER α protein only when phosphorylated at Ser167. The antibody cross reacts with a nonspecific band at around 77 kDa.	
Species predicted to react based on 100% sequence homology	Monkey	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser167 of human estrogen receptor α protein.	
Background	Estrogen receptor α (ER α), 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 α regulates transcription by recruiting coactivator proteins and interacting with general transcriptional machinery (2). Phosphorylation at multiple sites provides an important mechanism to regulate ER α 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 α 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	<ol style="list-style-type: none"> 1. Mangelsdorf, D.J. et al. (1995) <i>Cell</i> 83, 835-9. 2. Glass, C.K. and Rosenfeld, M.G. (2000) <i>Genes Dev</i> 14, 121-41. 3. Chen, D. et al. (1999) <i>Mol Cell Biol</i> 19, 1002-15. 4. Campbell, R.A. et al. (2001) <i>J Biol Chem</i> 276, 9817-24. 5. Chen, D. et al. (2000) <i>Mol Cell</i> 6, 127-37. 6. Joel, P.B. et al. (1998) <i>Mol Cell Biol</i> 18, 1978-84. 	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Western Blot Buffer	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.
Applications Key	W: Western Blotting
Cross-Reactivity Key	H: Human
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