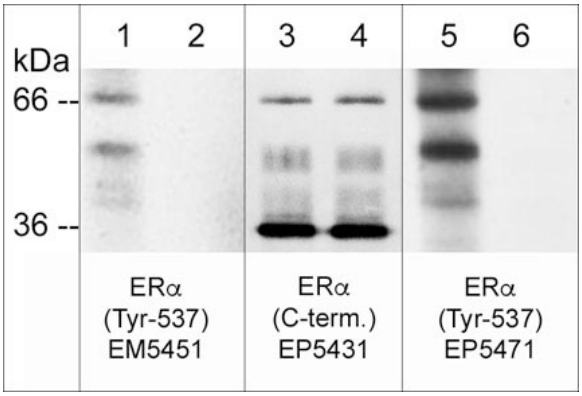
Estrogen Receptor α (Tyr-537), phospho-specific

Rabbit Polyclonal

Cat. # EP5471
Size 100 µl

Background

Estrogen receptor α (ERα) is a member of the steroid receptor superfamily and its structure includes an N-terminal ligand-independent transactivation domain (AF-1), a highly conserved DNA binding domain, and a C-terminal ligand-dependent transactivation domain (AF-2). AF-1 and AF-2 activate transcription independently and synergistically, and act in a promoter- and cell-specific manner. Phosphorylation at multiple sites provides an important mechanism to regulate ERα activity. Ser-104, Ser-106, Ser-118, and Ser-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 ERα activity. In addition to these sites, phosphorylation of Tyr-537 has been implicated in maximal hormone binding, dimerization, and transcriptional activity. Tyr-537, located in the AF-2 domain, is phosphorylated by c-Src leading to nuclear export of ERα and degradation. Thus, a variety of phosphorylation events control ERα activity.



Western blot image of human MCF-7 cells treated with pervanadate (1 mM) for 30 min. (lanes 1-6). Some lanes of the blot were then treated with alkaline phosphatase (lanes 2, 4, & 6). The blot was probed with mouse monoclonal anti-ERα (Tyr-537) phospho-specific (lanes 1 & 2), rabbit polyclonal anti-ERα (C-terminus) (lanes 3 & 4), and rabbit polyclonal anti-ERα (Tyr-537) phospho-specific (lanes 5 & 6).

Background References

Castoria, G. et al. (2012) Oncogene. 31:4868.
Anbalagan M, Rowan BG (2015) Mol Cell Endocrin. 418(3):264.

Applications

WB	1:1000
ELISA	1:2000

End user should determine optimal dilution for their particular applications and experiments.
Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1 hour at room temperature.

Species Reactivity

Hu, Rt, Ms, Ck, Fr

Specificity

The antibody was cross-adsorbed to unphosphorylated ERα (Tyr-537) peptide before affinity purification using phospho-ERα (Tyr-537) peptide (without carrier). This antibody detects several forms of ERα ranging from 66 to 35 kDa* on SDS-PAGE immunoblots of MCF-7 cells treated with pervanadate, and this reactivity is removed after alkaline phosphatase treatment.

*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

Immunogen

Uniprot ID: P03372

Phospho-ERα (Tyr-537) synthetic peptide (coupled to carrier protein) corresponds to amino acids surrounding Tyr-537 in human ERα. This sequence is well conserved in rat and mouse ERα, and is also well conserved in ERβ (Tyr-488).

Buffer and Storage

Rabbit polyclonal, affinity-purified antibody is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at –20°C. Stable for 1 year.

Related Products

EP5431	Estrogen Receptor α (C-terminus) Rabbit Polyclonal
EM5451	Estrogen Receptor α (Tyr-537), phospho-specific Mouse Monoclonal
SM2591	c-Src (N-terminal region) Mouse Monoclonal
SP1371	c-Src (Tyr-215)[conserved site], phospho-specific Rabbit Polyclonal
SM2611	c-Src (Tyr-530)[conserved site], phospho-specific Mouse Monoclonal

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