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Anti-Estrogen Receptor α (Tyr-537), Phosphospecific Antibody

Catalog # AN1789

Product Information

Application	WB
Primary Accession	P03372
Reactivity	Rat
Host	Mouse
Clonality	Mouse Monoclonal
Isotype	IgG1
Clone Names	M545
Calculated MW	66216

Additional Information

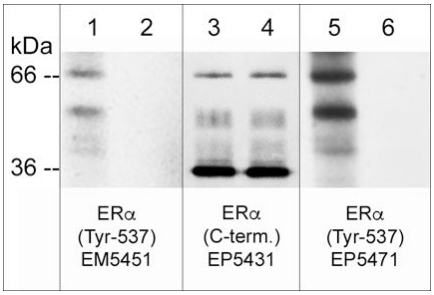
Gene ID	2099
Other Names	ESR, ESR1, ESRA, Estradiol receptor, Eralpha, ER
Target/Specificity	Estrogen receptor α (ERα) is a member of the steroid receptor superfamily and its structure includes an N-terminal ligand-independent transactivation domain (AF-1), a highly conserved DNA binding domain, and 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.
Dilution	WB~~1:1000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Anti-Estrogen Receptor α (Tyr-537), Phosphospecific Antibody is for research use only and not for use in diagnostic or therapeutic procedures.
Shipping	Blue Ice

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.

Images



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).