SANTA CRUZ BIOTECHNOLOGY, INC.

ERα (2-185): sc-4260 WB

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Estrogen receptors (ER) are members of the steroid/thyroid hormone receptor superfamily of ligand-activated transcription factors. Estrogen receptors, including ERα and ERβ, contain DNA binding and ligand binding domains and are critically involved in regulating the normal function of reproductive tissues. ERα and ERβ have been shown to be differentially activated by various ligands. Receptor-ligand interactions trigger a cascade of events, including dissociation from heat shock proteins, receptor dimerization, phosphorylation and the association of the hormone activated receptor with specific regulatory elements in target genes. Evidence suggests that ERα and ERβ may be regulated by distinct mechanisms even though they share many functional characteristics.

references

1. Evans, R.M. 1988. The steroid and thyroid hormone receptor superfamily. Science 240: 889-895.
2. Danielian, P.S., White, R., Lees, J.A. and Parker, M.G. 1992. Identification of a conserved region required for hormone dependent transcriptional activation by steroid hormone receptors. EMBO J. 11: 1025-1033.
3. Kliewer, S.A., Umesono, K., Mangelsdorf, D.J. and Evans, R.M. 1992. Retinoid X receptor interacts with nuclear receptors in retinoic acid, thyroid hormone and vitamin D3 signaling. Nature 355: 446-449.
4. Arnold, S.F., Obourn, J.D., Jaffe, H. and Notides, A.C. 1995. Phosphorylation of the human estrogen receptor on tyrosine 537 *in vivo* and by Src family tyrosine kinases *in vitro*. Mol. Endocrinol. 9: 24-33.
5. Mosselman, S., Polman, J. and Djikema, R. 1996. ERβ: identification and characterization of a novel human estrogen receptor. FEBS Lett. 392: 49-53.
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7. Tremblay, G.B., Tremblay, A., Copeland, N.G., Gilbert, D.J., Jenkins, N.A., Labrie, F. and Giguere, V. 1997. Cloning, chromosomal localization, and functional analysis of the murine estrogen receptor β. Mol. Endocrinol. 11: 353-365.
8. Paech, K., Webb, P., Kuiper, G.G., Nilsson, S., Gustafsson, J., Kushner, P.J. and Scanlan, T.S. 1997. Differential ligand activation of estrogen receptors ERα and ERβ at AP1 sites. Science 277: 1508-1510.

SOURCE

ERα (2-185) is expressed in *E. coli* as a 47 kDa tagged fusion protein corresponding to amino acids 2-185 of ERα of human origin.

PRODUCT

ERα (2-185) is purified from bacterial lysates (> 98%) by glutathione agarose affinity chromatography; supplied as 10 µg in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

ERα (2-185) is suitable as a Western blotting control for sc-7207 and sc-8005.

SELECT PRODUCT CITATIONS

1. Ulbrich, S.E., Kettler, A. and Einspanier, R. 2003. Expression and localization of estrogen receptor α, estrogen receptor β and progesterone receptor in the bovine oviduct *in vivo* and *in vitro*. J. Steroid Biochem. Mol. Biol. 84: 279-289.
2. Hartel, A., Didier, A., Ulbrich, S.E., Wierer, M. and Meyer, H.H. 2004. Characterisation of steroid receptor expression in the human prostate carcinoma cell line 22RV1 and quantification of androgen effects on mRNA regulation of prostate-specific genes. J. Steroid Biochem. Mol. Biol. 92: 187-197.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

RESEARCH USE

For research use only, not for use in diagnostic procedures.