

ERR α (h): 293T Lysate: sc-112428

BACKGROUND

Estrogen related receptor α (ERR α) is a nuclear receptor in the superfamily of ligand-regulated transcription factors and is a member of the NR3B orphan nuclear receptor subgroup (consisting of α , β and γ). ERR α plays a role in modulating the estrogen signaling pathway. In addition, the expression of ERR α has been shown to increase during fasting and cold exposure. ERR α may be important for regulating mitochondrial biogenesis and oxidative metabolism by acting directly on genes necessary for mitochondrial function. Mice lacking ERR α are unable to maintain their body temperature in the cold. ERR α may also be involved in the maintenance and formation of cartilage. This information could be useful in finding therapeutic agents for a variety of diseases affecting the joints.

REFERENCES

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- Greschik, H., et al. 2002. Structural and functional evidence for ligand-independent transcriptional activation by the estrogen-related receptor 3. *Mol. Cell* 9: 303-313.
- Hentschke, M., et al. 2003. Identification of PNRC2 and TLE1 as activation function-1 cofactors of the orphan nuclear receptor ERR γ . *Biochem. Biophys. Res. Commun.* 312: 975-982.
- Cheung, C.P., et al. 2005. Expression and functional study of estrogen receptor-related receptors in human prostatic cells and tissues. *J. Clin. Endocrinol. Metab.* 90: 1830-1844.
- Fujimura, T., et al. 2007. Increased expression of estrogen-related receptor α (ERR α) is a negative prognostic predictor in human prostate cancer. *Int. J. Cancer* 120: 2325-2330.
- Villena, J.A., et al. 2007. Orphan nuclear receptor estrogen-related receptor α is essential for adaptive thermogenesis. *Proc. Natl. Acad. Sci. USA* 104: 1418-1423.
- Bonnelye, E., et al. 2007. The orphan nuclear estrogen receptor-related receptor α regulates cartilage formation *in vitro*: implication of Sox9. *Endocrinology* 148: 1195-1205.
- Zhang, Z., et al. 2007. Interplay between estrogen-related receptor α (ERR α) and γ (ERR γ) on the regulation of ERR α gene expression. *Mol. Cell. Endocrinol.* 264: 128-141.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CHROMOSOMAL LOCATION

Genetic locus: ESRRA (human) mapping to 11q13.1.

PRODUCT

ERR α (h): 293T Lysate represents a lysate of human ERR α transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

ERR α (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive ERR α antibodies. Recommended use: 10-20 μ l per lane.

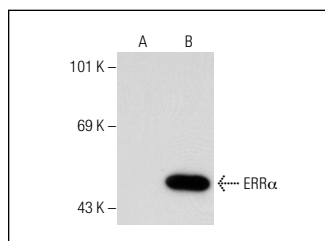
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

ERR α (2ERR2): sc-65718 is recommended as a positive control antibody for Western Blot analysis of enhanced human ERR α expression in ERR α transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

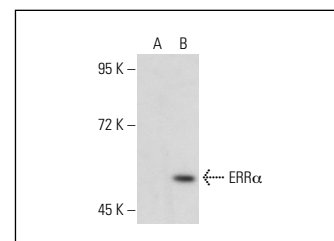
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



ERR α (2ERR2): sc-65718. Western blot analysis of ERR α expression in non-transfected: sc-117752 (A) and human ERR α transfected: sc-112428 (B) 293T whole cell lysates.



ERR α (2ERR2): sc-65718. Western blot analysis of ERR α expression in non-transfected: sc-117752 (A) and human ERR α transfected: sc-112428 (B) 293T whole cell lysates.

RESEARCH USE

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