

## ERR $\alpha$ (V-19): sc-32971

### BACKGROUND

Estrogen related receptor  $\alpha$  (ERR $\alpha$ ) 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  $\alpha$ ,  $\beta$ , and  $\gamma$ ). ERR $\alpha$  plays a role in modulating the estrogen signaling pathway. In addition, the expression of ERR $\alpha$  has been shown to increase during fasting and cold exposure. ERR $\alpha$  may be important for regulating mitochondrial biogenesis and oxidative metabolism by acting directly on genes necessary for mitochondrial function. Mice lacking ERR $\alpha$  are unable to maintain their body temperature in the cold. ERR $\alpha$  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

1. Chen, F., et al. 1999. Identification of two hERR2-related novel nuclear receptors utilizing bioinformatics and inverse PCR. *Gene* 228: 101-109.
2. Hong, H., et al. 1999. Hormone-independent transcriptional activation and coactivator binding by novel orphan nuclear receptor ERR3. *J. Biol. Chem.* 274: 22618-22626.

### CHROMOSOMAL LOCATION

Genetic locus: ESRRA (human) mapping to 11q13.1; Esrra (mouse) mapping to 19 A.

### SOURCE

ERR $\alpha$  (V-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ERR $\alpha$  of human origin.

### PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-32971 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

ERR $\alpha$  (V-19) is recommended for detection of ERR $\alpha$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ERR $\alpha$  (V-19) is also recommended for detection of ERR $\alpha$  in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ERR $\alpha$  siRNA (h): sc-44706, ERR $\alpha$  siRNA (m): sc-44707, ERR $\alpha$  shRNA Plasmid (h): sc-44706-SH, ERR $\alpha$  shRNA Plasmid (m): sc-44707-SH, ERR $\alpha$  shRNA (h) Lentiviral Particles: sc-44706-V and ERR $\alpha$  shRNA (m) Lentiviral Particles: sc-44707-V.

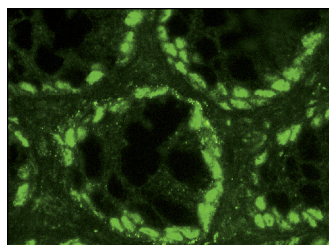
Molecular Weight of ERR $\alpha$ : 53 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HeLa + serum-starved cell lysate: sc-24693 or mouse brain extract: sc-2253.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

### DATA



ERR $\alpha$  (V-19): sc-32971. Immunofluorescence staining of normal mouse intestine frozen section showing nuclear staining.

### SELECT PRODUCT CITATIONS

1. Fisher, K.W., et al. 2011. Kinase suppressor of ras 1 (KSR1) regulates PGC1 $\alpha$  and estrogen-related receptor  $\alpha$  to promote oncogenic Ras-dependent anchorage-independent growth. *Mol. Cell. Biol.* 31: 2453-2461.
2. Fradet, A., et al. 2011. Dual function of ERR $\alpha$  in breast cancer and bone metastasis formation: implication of VEGF and osteoprotegerin. *Cancer Res.* 71: 5728-5738.

### STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **ERR $\alpha$  (2ERR2): sc-65718** or **ERR $\alpha$  (2ERR7): sc-65720**, our highly recommended monoclonal alternatives to ERR $\alpha$  (V-19).