

## ERR $\beta$ (K-16): sc-47662

### BACKGROUND

Estrogen and progesterone receptors are members of a family of transcription factors that are regulated by the binding of their cognate ligands. The interaction of hormone-bound estrogen receptors with estrogen responsive elements (EREs) alters transcription of ERE-containing genes. Estrogen receptor-related proteins (ERR $\alpha$ ,  $\beta$  and  $\gamma$ ) are orphan nuclear receptors. Like estrogen receptors, ERRs bind specifically to EREs to activate reporter genes. ERR $\beta$ , also known as steroid hormone receptor ERR2 or estrogen receptor-like 2, contains a DNA binding domain and is highly homologous to ER $\alpha$ . ERR $\beta$  is expressed during mammary gland development and is critical in embryo development. It is expressed in a subset of diploid trophoblast cells which make up the chorion. The loss of ERR $\beta$  results in severely impaired chorion formation leading to placental failure and embryonic death. This suggests that ERR $\beta$  may be necessary for the proper formation or function of the chorion. In addition, ERR $\beta$  potently represses the transcriptional activity of Nrf2.

### REFERENCES

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### CHROMOSOMAL LOCATION

Genetic locus: ESRRB (human) mapping to 14q24.3; Esrrb (mouse) mapping to 12 D2.

### SOURCE

ERR $\beta$  (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ERR $\beta$  of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-47662 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

ERR $\beta$  (K-16) is recommended for detection of ERR $\beta$  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 $\beta$  (K-16) is also recommended for detection of ERR $\beta$  in additional species, including equine, canine and porcine.

Suitable for use as control antibody for ERR $\beta$  siRNA (h): sc-60603, ERR $\beta$  siRNA (m): sc-60605, ERR $\beta$  shRNA Plasmid (h): sc-60603-SH, ERR $\beta$  shRNA Plasmid (m): sc-60605-SH, ERR $\beta$  shRNA (h) Lentiviral Particles: sc-60603-V and ERR $\beta$  shRNA (m) Lentiviral Particles: sc-60605-V.

Molecular Weight of ERR $\beta$ : 56 kDa.

### 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.

### 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.



Try **ERR $\beta$ / $\gamma$  (E-1): sc-376449**, our highly recommended monoclonal alternative to ERR $\beta$  (K-16).