

# ERR $\beta$ / $\gamma$ (H-66): sc-68878

## 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, is expressed during mammary gland development and is critical in embryo development. The loss of ERR $\beta$  results in severely impaired chorion formation leading to placental failure and embryonic death. ERR $\beta$  also potently represses the transcriptional activity of Nrf2. ERR $\gamma$ , also known as ERR3, is abundantly expressed in fetal heart. The loss of ERR $\gamma$  results in lactatemia and death within the first week of life.

## REFERENCES

1. Luo, J., et al. 1997. Placental abnormalities in mouse embryos lacking the orphan nuclear receptor ERR $\beta$ . *Nature* 388: 778-782.
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.
3. Chen, F., et al. 1999. Identification of two hERR2-related novel nuclear receptors utilizing bioinformatics and inverse PCR. *Gene* 228: 101-109.

## CHROMOSOMAL LOCATION

Genetic locus: ESRRG (human) mapping to 1q41; Esrrg (mouse) mapping to 1 H6.

## SOURCE

ERR $\beta$ / $\gamma$  (H-66) is a rabbit polyclonal antibody raised against amino acids 251-316 mapping within an internal region 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.

## APPLICATIONS

ERR $\beta$ / $\gamma$  (H-66) is recommended for detection of ERR $\beta$  and ERR $\gamma$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 $\beta$ / $\gamma$  (H-66) is also recommended for detection of ERR $\beta$  and ERR $\gamma$  in additional species, including equine, canine, bovine, porcine and avian.

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

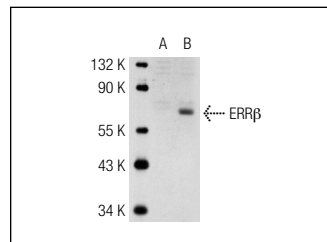
Molecular Weight of ERR $\gamma$ : 51 kDa.

Positive Controls: ERR $\beta$  (h): 293T Lysate: sc-128549.

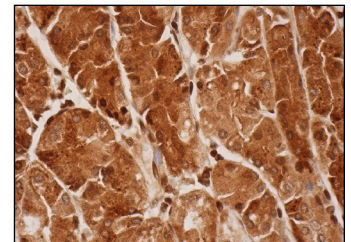
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



ERR $\beta$ / $\gamma$  (H-66): sc-68878. Western blot analysis of ERR $\beta$  expression in non-transfected: sc-117752 (A) and human ERR $\beta$  transfected: sc-128549 (B) 293T whole cell lysates.



ERR $\beta$ / $\gamma$  (H-66): sc-68878. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing nuclear and cytoplasmic staining of glandular cells.

## 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.

**MONOS**  
Satisfaction  
Guaranteed

Try **ERR $\beta$ / $\gamma$  (E-1): sc-376449** or **ERR $\gamma$  (D-1): sc-393969**, our highly recommended monoclonal alternatives to ERR $\beta$ / $\gamma$  (H-66).