SANTA CRUZ BIOTECHNOLOGY, INC.

COUP-TF/EAR2 (F-11): sc-166941

The Power to Question

BACKGROUND

EAR2 (v-erb-a avian erythroblastic leukemia viral oncogene homolog-like 2) protein binds a *cis* enhancer element (TGACCT motif) upstream of the renin gene and represses renin gene transcription. EAR2 also contributes to gonadotropin-dependent derepression of LHR promoter activity in granulosa cells. EAR2 mRNA is abundant in the liver, and EAR2 protein localizes to the nucleus of As4.1 cells.

REFERENCES

1. Ladias, J.A., et al. 1992. Transcriptional regulation of human apolipoprotein genes ApoB, ApoCIII, and ApoAII by members of the steroid hormone receptor superfamily HNF4, ARP1, EAR2, and EAR3. J. Biol. Chem. 267: 15849-15860.
2. Barnhart, K.M. and Mellon, P.L. 1994. The sequence of a murine cDNA encoding EAR2, a nuclear orphan receptor. Gene 142: 313-314.
3. Islam, T.C. and Toftgard, R. 1994. Nuclear orphan receptor-binding retinoic acid response elements in keratinocytes. Biochem. Biophys. Res. Commun. 203: 545-552.
4. Chu, K. and Zingg, H.H. 1997. The nuclear orphan receptors COUP-TFII and EAR2 act as silencers of the human oxytocin gene promoter. J. Mol. Endocrinol. 19: 163-172.
5. Chu, K., et al. 1998. Nuclear orphan receptors COUP-TFII and EAR2: presence in oxytocin-producing uterine cells and functional interaction with the oxytocin gene promoter. Mol. Cell. Endocrinol. 137: 145-154.
6. Zhang, Y. and Dufau, M.L. 2000. Nuclear orphan receptors regulate transcription of the gene for the human luteinizing hormone receptor. J. Biol. Chem. 275: 2763-2770.
7. Zhu, X.G., et al. 2000. The orphan nuclear receptor EAR2 is a negative coregulator for thyroid hormone nuclear receptor function. Mol. Cell. Biol. 20: 2604-2618.
8. Zhang, Y. and Dufau, M.L. 2001. EAR2 and EAR3/COUP-TFI regulate transcription of the rat LH receptor. Mol. Endocrinol. 15: 1891-1905.

SOURCE

COUP-TF/EAR2 (F-11) is a mouse monoclonal antibody raised against amino acids 121-350 mapping within an internal region of EAR2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-166941 X, 200 µg/0.1 ml.

COUP-TF/EAR2 (F-11) is available conjugated to agarose (sc-166941 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166941 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166941 PE), fluorescein (sc-166941 FITC), Alexa Fluor® 488 (sc-166941 AF488), Alexa Fluor® 546 (sc-166941 AF546), Alexa Fluor® 594 (sc-166941 AF594) or Alexa Fluor® 647 (sc-166941 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166941 AF680) or Alexa Fluor® 790 (sc-166941 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

COUP-TF/EAR2 (F-11) is recommended for detection of COUP-TFI, ARP-1 and EAR2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

COUP-TF/EAR2 (F-11) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

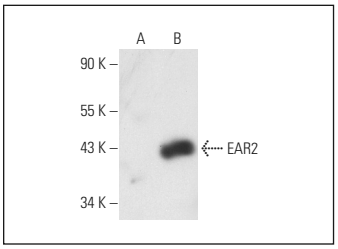
Molecular Weight of COUP-TF/EAR2: 45 kDa.

Positive Controls: Ramos cell lysate: sc-2216, Hep G2 cell lysate: sc-2227 or EAR2 (m): 293T Lysate: sc-119899.

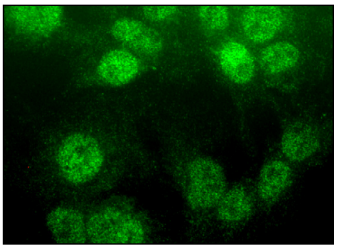
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



COUP-TF/EAR2 (F-11): sc-166941. Western blot analysis of EAR2 expression in non-transfected: sc-117752 (**A**) and mouse EAR2 transfected: sc-119899 (**B**) 293T whole cell lysates.



COUP-TF/EAR2 (F-11): sc-166941. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization.

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 for detailed protocols and support products.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA