SANTA CRUZ BIOTECHNOLOGY, INC.

ARA70 (H-300): sc-28749

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Androgen receptor (AR) coactivator ARA70, also designated RFG and ELE1, is a putative coactivator that specifically enhances the activity of the androgen receptor. In human thyroid carcinomas, Ret proto-oncogene fuses to ARA70 to form Ret/PTC3 by an intrachromosomal inversion of chromosome 10 *in vivo*. ARA70 is expressed as two isoforms, ARA70α and ARA70β. The shorter variant, ARA70β, results from an internal 985-bp deletion. ARA70α is widely expressed, and its expression is highest in testis and adipose tissues; whereas ARA70β is solely expressed in the testis. ARA70α can function as a ligand-enhanced coactivator of PPARγ in adipocytes. However, PPARγ-ARA70 transactivation can be squelched by AR, which suggests cross talk between PPARγ- and AR-mediated response. ARA70α has no intrinsic transcription activation domain or histone acetyltransferase activity, but it interacts with histone acetyltransferase, p/CAF, CBP and p300/CBP-associated factors and the basal transcription factor TFIIB. The interaction between ARA70 and AR occurs through the ligand-binding domain. The presence of ARA70 can enhance the androgenic activity of 17 β-estradiol (E2) and antiandrogens toward AR. ARA70 may be involved in prostate carcinogenesis and ovarian cancer and may serve as a key mediator of estrogen-androgen synergism.

REFERENCES

1. Santoro, M., et al. 1994. Molecular characterization of Ret/PTC3: a novel rearranged version of the Ret proto-oncogene in a human thyroid papillary carcinoma. Oncogene 9: 509-516.
2. Bongarzone, I., et al. 1994. Frequent activation of Ret proto-oncogene by fusion with a new activating gene in papillary thyroid carcinomas. Cancer Res. 54: 2979-2985.
3. Alen, P., et al. 1999. Interaction of the putative androgen receptor-specific coactivator ARA70/ELE1 α with multiple steroid receptors and identification of an internally deleted ELE1 β isoform. Mol. Endocrinol. 13: 117-128.

CHROMOSOMAL LOCATION

Genetic locus: NCOA4 (human) mapping to 10q11.23; Ncoa4 (mouse) mapping to 14 B.

SOURCE

ARA70 (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of ARA70 of human origin.

PRODUCT

Each vial contains 200 µg IgG 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-28749 X, 200 µg/0.1 ml.

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.

APPLICATIONS

ARA70 (H-300) is recommended for detection of ARA70 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

ARA70 (H-300) is also recommended for detection of ARA70 in additional species, including porcine.

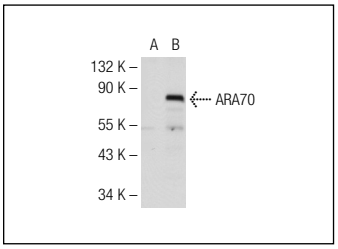
Suitable for use as control antibody for ARA70 siRNA (h): sc-29719, ARA70 siRNA (m): sc-29720, ARA70 shRNA Plasmid (h): sc-29719-SH, ARA70 shRNA Plasmid (m): sc-29720-SH, ARA70 shRNA (h) Lentiviral Particles: sc-29719-V and ARA70 shRNA (m) Lentiviral Particles: sc-29720-V.

ARA70 (H-300) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of ARA70: 70 kDa.

Positive Controls: ARA70 (h): 293T Lysate: sc-113567, DU 145 cell lysate: sc-2268 or PC-3 cell lysate: sc-2220.

DATA



ARA70 (H-300): sc-28749. Western blot analysis of ARA70 expression in non-transfected: sc-117752 (**A**) and human ARA70 transfected: sc-113567 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Brooke, G.N., et al. 2008. Mechanisms of androgen receptor activation in advanced prostate cancer: differential co-activator recruitment and gene expression. Oncogene 27: 2941-2950.
2. Kollara, A. and Brown, T.J. 2010. Variable expression of nuclear receptor coactivator 4 (NcoA4) during mouse embryonic development. J. Histochem. Cytochem. 58: 595-609.
3. Kollara, A., et al. 2011. Dynamic distribution of nuclear coactivator 4 during mitosis: association with mitotic apparatus and midbodies. PLoS ONE 6: e22257.

MONOS Satisfaction Guaranteed

Try **ARA70 (C-4): sc-373739**, our highly recommended monoclonal alternative to ARA70 (H-300).