

ARA70 (Q-19): sc-30968

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, ARA70 α and ARA70 β . The shorter variant, ARA70 β , results from an internal 985-bp deletion. ARA70 α is widely expressed, and its expression is highest in testis and adipose tissues; whereas ARA70 β is solely expressed in the testis. ARA70 α can function as a ligand-enhanced coactivator of PPAR γ in adipocytes. However, PPAR γ -ARA70 transactivation can be squelched by AR, which suggests cross talk between PPAR γ - and AR-mediated response. ARA70 α 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.
4. Yeh, S., et al. 1999. Differential induction of androgen receptor transactivation by different androgen receptor coactivators in human prostate cancer DU145 cells. *Endocrine* 11: 195-202.

CHROMOSOMAL LOCATION

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

SOURCE

ARA70 (Q-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ARA70 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-30968 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

ARA70 (Q-19) 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 μ g per 100-500 μ g 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).

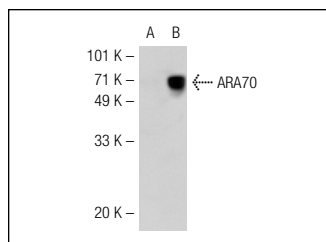
ARA70 (Q-19) is also recommended for detection of ARA70 in additional species, including canine, bovine and porcine.

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.

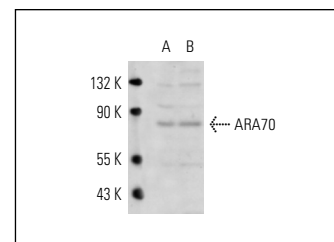
Molecular Weight of ARA70: 70 kDa.

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

DATA



ARA70 (Q-19): sc-30968. Western blot analysis of ARA70 expression in non-transfected: sc-117752 (A) and human ARA70 transfected: sc-113567 (B) 293T whole cell lysates.



ARA70 (Q-19): sc-30968. Western blot analysis of ARA70 expression in DU 145 (A) and PC-3 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. 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.
2. Kollara, A., et al. 2011. Dynamic distribution of nuclear coactivator 4 during mitosis: association with mitotic apparatus and midbodies. *PLoS ONE* 6: e22257.

STORAGE

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

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Try **ARA70 (C-4): sc-373739**, our highly recommended monoclonal alternative to ARA70 (Q-19).