

# ARA70 (C-4): sc-373739



The Power to Question

## BACKGROUND

Androgen receptor (AR) coactivator ARA70, also designated RFG and ELE1, is a putative co-activator 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 $\alpha$  and ARA70 $\beta$ . The shorter variant, ARA70 $\beta$ , results from an internal 985-bp deletion. ARA70 $\alpha$  is widely expressed, and its expression is highest in testis and adipose tissues; whereas ARA70 $\beta$  is solely expressed in the testis. ARA70 $\alpha$  can function as a ligand-enhanced co-activator of PPAR $\gamma$  in adipocytes. However, PPAR $\gamma$ -ARA70 transactivation can be squelched by AR, which suggests cross talk between PPAR $\gamma$ - and AR-mediated response. ARA70 $\alpha$  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  $\beta$ -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.

## CHROMOSOMAL LOCATION

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

## SOURCE

ARA70 (C-4) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of ARA70 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG $\kappa$  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-373739 X, 200  $\mu$ g/0.1 ml.

ARA70 (C-4) is available conjugated to agarose (sc-373739 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373739 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373739 PE), fluorescein (sc-373739 FITC), Alexa Fluor<sup>®</sup> 488 (sc-373739 AF488), Alexa Fluor<sup>®</sup> 546 (sc-373739 AF546), Alexa Fluor<sup>®</sup> 594 (sc-373739 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-373739 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-373739 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-373739 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor<sup>®</sup> is a trademark of Molecular Probes, Inc., Oregon, USA

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## APPLICATIONS

ARA70 (C-4) is recommended for detection of ARA70 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

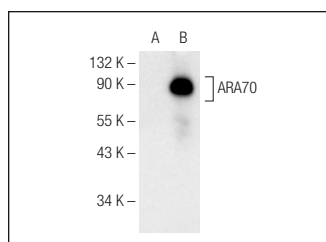
Suitable for use as control antibody for ARA70 siRNA (h): sc-29719, ARA70 siRNA (m): sc-29720, ARA70 shRNA Plasmid (h): sc-29719-SH, ARA70 shRNA Plasmid (m): sc-29720-SH, ARA70 shRNA (h) Lentiviral Particles: sc-29719-V and ARA70 shRNA (m) Lentiviral Particles: sc-29720-V.

ARA70 (C-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

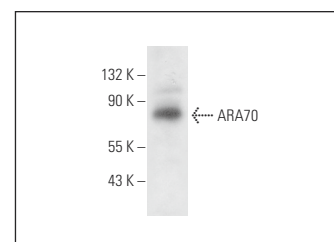
Molecular Weight of ARA70: 70 kDa.

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

## DATA



ARA70 (C-4): sc-373739. Western blot analysis of ARA70 expression in non-transfected: sc-117752 (A) and human ARA70 transfected: sc-113567 (B) 293T whole cell lysates.



ARA70 (C-4): sc-373739. Western blot analysis of ARA70 expression in DU 145 whole cell lysate.

## SELECT PRODUCT CITATIONS

- Dowdle, W.E., et al. 2014. Selective VPS34 inhibitor blocks autophagy and uncovers a role for NCOA4 in ferritin degradation and iron homeostasis *in vivo*. *Nat. Cell Biol.* 16: 1069-1079.
- Goodwin, J.M., et al. 2017. Autophagy-independent lysosomal targeting regulated by ULK1/2-FIP200 and ATG9. *Cell Rep.* 20: 2341-2356.
- Li, Z., et al. 2019. Allele-selective lowering of mutant HTT protein by HTT-LC3 linker compounds. *Nature* 575: 203-209.
- Kobylarz, M.J., et al. 2020. An iron-dependent metabolic vulnerability underlies VPS34-dependence in RKO cancer cells. *PLoS ONE* 15: e0235551.
- Li, X.J., et al. 2021. Gossypol, a novel modulator of VCP, induces autophagic degradation of mutant huntingtin by promoting the formation of VCP/p97-LC3-mHTT complex. *Acta Pharmacol. Sin.* 42: 1556-1566.

## RESEARCH USE

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