

# AR (AN1-15): sc-56824

## BACKGROUND

Androgens exhibit a wide range of effects on the development, maintenance and regulation of male phenotype and male reproductive physiology. The androgen receptor (AR) is a member of the steroid superfamily of ligand-dependent transcription factors. ARs bind the two biologically active androgens, testosterone (T) and dihydrotestosterone (DHT), with high and nearly identical affinities; however, the rates of association and dissociation of T are about three times more rapid than those of DHT. This difference has resulted in speculation as to whether these differences in binding kinetics could account for the different physiological effects of T and DHT. A striking feature of AR is its rapid degradation in the absence of ligand. It is now well established that androgen binding results in an at least six-fold increase in androgen stability and that ligand-induced stabilization of AR is highly androgen-specific.

## REFERENCES

- Walsh, P.C., et al. 1974. Familial incomplete male pseudohermaphroditism type 2: decreased dihydrotestosterone formation in pseudovaginal perineoscrotal hypospadias. *N. Engl. J. Med.* 291: 944-949.
- Imperato-McGinley, J., et al. 1974. Steroid 5 $\alpha$ -reductase deficiency in man: an inherited form of male pseudo-hermaphroditism. *Science* 186: 1213-1215.
- Wilson, E.M., et al. 1976. Binding properties of androgen receptors: evidence for identical receptors in rat testis, epididymis and prostate. *J. Biol. Chem.* 251: 5620-5629.
- Grino, P.B., et al. 1990. Testosterone at high concentrations interacts with the human androgen receptor similarly to dihydro-testosterone. *Endocrinology* 126: 1165-1172.
- Kemppainen, J.A., et al. 1992. AR phosphorylation, turnover, nuclear transport and transcriptional activation: specificity for steroids and anti-hormones. *J. Biol. Chem.* 267: 968-974.

## CHROMOSOMAL LOCATION

Genetic locus: AR (human) mapping to Xq12; Ar (mouse) mapping to X C3.

## SOURCE

AR (AN1-15) is a rat monoclonal antibody raised against a 241 amino acid fusion protein derived from AR of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

AR (AN1-15) is available conjugated to agarose (sc-56824 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-56824 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-56824 PE), fluorescein (sc-56824 FITC), Alexa Fluor<sup>®</sup> 488 (sc-56824 AF488), Alexa Fluor<sup>®</sup> 546 (sc-56824 AF546), Alexa Fluor<sup>®</sup> 594 (sc-56824 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-56824 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-56824 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-56824 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

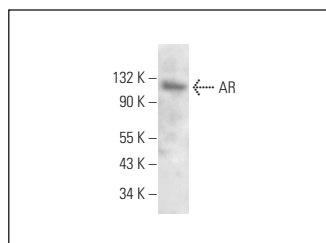
AR (AN1-15) is recommended for detection of AR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); non cross-reactive with estrogen, progesterone or glucocorticoid receptors.

Suitable for use as control antibody for AR siRNA (h): sc-29204, AR siRNA (m): sc-29203, AR shRNA Plasmid (h): sc-29204-SH, AR shRNA Plasmid (m): sc-29203-SH, AR shRNA (h) Lentiviral Particles: sc-29204-V and AR shRNA (m) Lentiviral Particles: sc-29203-V.

Molecular Weight of AR: 110 kDa.

Positive Controls: LNCaP cell lysate: sc-2231, NIH/3T3 whole cell lysate: sc-2210 or MCF7 whole cell lysate: sc-2206.

## DATA



AR (AN1-15): sc-56824. Western blot analysis of AR expression in NIH/3T3 whole cell lysate.

## SELECT PRODUCT CITATIONS

- Elsakka, E.G.E., et al. 2020. Androgen/androgen receptor affects gentamicin-induced nephrotoxicity through regulation of megalin expression. *Life Sci.* 251: 117628.
- Oulès, B., et al. 2020. Contribution of GATA6 to homeostasis of the human upper pilosebaceous unit and acne pathogenesis. *Nat. Commun.* 11: 5067.
- Gao, H., et al. 2021. 3,5,6-trichloro-2-pyridinol intensifies the effect of chlorpyrifos on the paracrine function of Sertoli cells by preventing binding of testosterone and the androgen receptor. *Toxicology* 460: 152883.

## 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) for detailed protocols and support products.

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