SANTA CRUZ BIOTECHNOLOGY, INC.

AR (F39.4.1): sc-52309

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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

1. 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.
2. Imperato-McGinley, J., et al. 1974. Steroid 5a-reductase deficiency in man: an inherited form of male pseudohermaphroditism. Science 186: 1213-1215.
3. 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.

CHROMOSOMAL LOCATION

Genetic locus: AR (human) mapping to Xq12.

SOURCE

AR (F39.4.1) is a mouse monoclonal antibody raised against androgen receptor of human origin.

PRODUCT

Each vial contains 500 µl culture supernatant containing IgG_1 with < 0.1% sodium azide.

APPLICATIONS

AR (F39.4.1) is recommended for detection of AR of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:10-1:200), immunoprecipitation [10-20 µl per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:10-1:200) and immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:10-1:200).

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

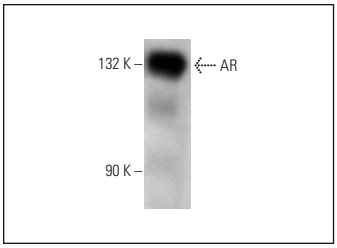
Molecular Weight of AR: 110 kDa.

Positive Controls: LNCaP cell lysate: sc-2231, SK-BR-3 nuclear extract: sc-2134 or MCF7 whole cell lysate: sc-2206.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

DATA



AR (F39.4.1): sc-52309. Western blot analysis of AR expression in LNCaP whole cell lysate.

SELECT PRODUCT CITATIONS

1. Fadini, G.P., et al. 2009. Effects of androgens on endothelial progenitor cells *in vitro* and *in vivo*. Clin. Sci. 117: 355-364.
2. Bagheri-Fam, S., et al. 2011. Defective survival of proliferating Sertoli cells and androgen receptor function in a mouse model of the ATR-X syndrome. Hum. Mol. Genet. 20: 2213-2224.
3. Berry, P.A., et al. 2011. The calcium sensor STIM1 is regulated by androgens in prostate stromal cells. Prostate 71: 1646-1655.
4. Sekula-Neuner, S., et al. 2017. Phospholipid arrays on porous polymer coatings generated by micro-contact spotting. Beilstein J. Nanotechnol. 8: 715-722.

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.

CONJUGATES

See **AR (441): sc-7305** for AR antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.