

# p-AR (4H24): sc-71773

## BACKGROUND

Androgens exhibit a wide range of effects on the development, maintenance and regulation of male phenotype and reproductive physiology in males. The androgen receptor (AR) is a member of the steroid superfamily of ligand-dependent transcription factors. ARs bind active testosterone (T) and dihydrotestosterone (DHT). The rates of association and dissociation of T are about three times more rapid than those of DHT. This difference in binding kinetics may account for the different physiological effects of T and DHT. Androgen binding results in an at least six-fold increase in androgen receptor stability. Akt phosphorylates human AR at Serines 210 and 790. The synthetic androgen R1881 elevates phosphorylation of Serines 308 and 650 *in vitro*.

## REFERENCES

- Walsh, P.C., et al. 1974. Familial incomplete male pseudohermaphroditism type 2: decreased dihydro-testosterone 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 pseudohermaphroditism. *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. *Endocrinol.* 126: 1165-1172.
- Kemppainen, J.A., et al. 1992. Androgen receptor phosphorylation, turnover, nuclear transport and transcriptional activation: specificity for steroids and antihormones. *J. Biol. Chem.* 267: 968-974.
- Zhou, Z.X., et al. 1994. The androgen receptor: an overview. *Recent Prog. Horm. Res.* 49: 249-274.
- Zhou, Z.X., et al. 1995. Specificity of ligand-dependent androgen receptor stabilization: receptor domain interactions influence ligand dissociation and receptor stability. *Mol. Endocrinol.* 9: 208-218.
- Lin, H.K., et al. 2001. Akt suppresses androgen-induced apoptosis by phosphorylating and inhibiting androgen receptor. *Proc. Natl. Acad. Sci. USA* 98: 7200-7205.
- Gioeli, D., et al. 2002. Androgen receptor phosphorylation. Regulation and identification of the phosphorylation sites. *J. Biol. Chem.* 277: 29304-29314.

## CHROMOSOMAL LOCATION

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

## SOURCE

p-AR (4H24) is a mouse monoclonal antibody raised against a short amino acid sequence containing phosphorylated raised against a synthetic peptide corresponding to amino acids 207-221 of human origin, containing Ser 213 phosphorylation site of AR of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

p-AR (4H24) is recommended for detection of Ser 213 and Ser 210 phosphorylated AR of mouse, rat, human, porcine and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

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 p-AR: 110/87 kDa.

## 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.