

# $\alpha_{1D}$ -AR (H-142): sc-10721

## BACKGROUND

$\alpha_{1D}$ -adrenergic receptors ( $\alpha_{1D}$ -ARs) couple to  $G_{q/11}$  and participate directly in sympathetic regulation of systemic blood pressure by vasoconstriction.  $\alpha_{1D}$ -AR can form hetero-oligomers with  $\alpha_{1B}$  receptors.  $\alpha_{1D}$ -AR transcripts are abundant in prostate and aorta.  $\alpha_{1A}$  adrenergic receptors ( $\alpha_{1A}$ -ARs) mediate actions in the sympathetic nervous system through the binding of the catecholamines, epinephrine and norepinephrine.  $\alpha_{1A}$ -adrenergic receptors couple to  $G_{q/11}$  and regulate blood pressure due to changes in vascular tone and cardiac output. Alternative splicing of this gene generates four isoforms with distinct C-termini, and the different expression profile of these subtypes produces distinct patterns of activation.  $\alpha_{1A}$ -AR transcripts are abundant in heart, brain, liver, and prostate.  $\alpha_{1A}$ -AR transcript sizes of 6.0, 4.0, 3.0, and 2.0 kb have been detected in liver.  $\alpha_{1A}$ -AR transcript sizes of 6.0, 4.0 and 3.0 kb transcripts have been detected in heart, and 6.0 kb and 4.0 kb transcripts have been detected in prostate.

## CHROMOSOMAL LOCATION

Genetic locus: ADRA1D (human) mapping to 20p13; Adra1d (mouse) mapping to 2 F1.

## SOURCE

$\alpha_{1D}$ -AR (H-142) is a rabbit polyclonal antibody raised against amino acids 431-572 mapping at the C-terminus of  $\alpha_{1D}$ -AR of human origin.

## PRODUCT

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

## APPLICATIONS

$\alpha_{1D}$ -AR (H-142) is recommended for detection of  $\alpha_{1D}$ -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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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  $\alpha_{1D}$ -AR siRNA (h): sc-29620,  $\alpha_{1D}$ -AR siRNA (m): sc-29621,  $\alpha_{1D}$ -AR shRNA Plasmid (h): sc-29620-SH,  $\alpha_{1D}$ -AR shRNA Plasmid (m): sc-29621-SH,  $\alpha_{1D}$ -AR shRNA (h) Lentiviral Particles: sc-29620-V and  $\alpha_{1D}$ -AR shRNA (m) Lentiviral Particles: sc-29621-V.

Molecular Weight (predicted) of  $\alpha_{1D}$ -AR: 60 kDa.

Molecular Weight (observed) of  $\alpha_{1D}$ -AR: 47 kDa.

Positive Controls: A549 cell lysate: sc-2413, NCI-H460 whole cell lysate: sc-364235 or Hep G2 cell lysate: sc-2227.

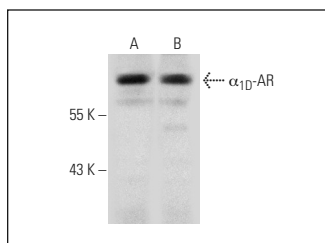
## STORAGE

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

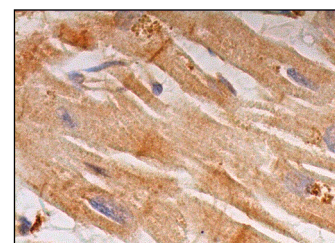
## RESEARCH USE

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

## DATA



$\alpha_{1D}$ -AR (H-142): sc-10721. Western blot analysis of  $\alpha_{1D}$ -AR expression in A519 (A) and NCI-H460 (B) whole cell lysates.



$\alpha_{1D}$ -AR (H-142): sc-10721. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic and membrane staining of myocytes.

## SELECT PRODUCT CITATIONS

- Manni, L., et al. 2005. Ovarian expression of  $\alpha_1$ - and  $\beta_2$ -adrenoceptors and p75 neurotrophin receptors in rats with steroid-induced polycystic ovaries. *Auton. Neurosci.* 118: 79-87.
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- Manni, L., et al. 2005. Effect of anti-NGF on ovarian expression of  $\alpha_1$ - and  $\beta_2$ -adrenoceptors, Trk A, p75NTR, and tyrosine hydroxylase in rats with steroid-induced polycystic ovaries. *Am. J. Physiol. Regul. Integr. Comp. Physiol.* 290: R826-R835.
- Manni, L., et al. 2005. Effect of exercise on ovarian morphology and expression of nerve growth factor and  $\alpha_1$ - and  $\beta_2$ -adrenergic receptors in rats with steroid-induced polycystic ovaries. *J. Neuroendocrinol.* 17: 846-858.
- Ishihama, H., et al. 2006. Activation of  $\alpha_{1D}$  adrenergic receptors in the rat urothelium facilitates the micturition reflex. *J. Urol.* 175: 358-364.
- Pradidarcheep, W., et al. 2009. Lack of specificity of commercially available antisera against muscarinic and adrenergic receptors. *Naunyn Schmiedebergs Arch. Pharmacol.* 379: 397-402.
- Fan, L.L., et al. 2009.  $\alpha_{1D}$ -adrenergic receptor insensitivity is associated with alterations in its expression and distribution in cultured vascular myocytes. *Acta Pharmacol. Sin.* 30: 1585-1593.
- Chen, L., et al. 2009. Mechanisms of  $\alpha_1$ -adrenoceptor mediated QT prolongation in the diabetic rat heart. *Life Sci.* 84: 250-256.

**MONOS**  
Satisfaction  
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Try  $\alpha_{1D}$ -AR (F-10): sc-390884 or  $\alpha_{1D}$ -AR (B-6): sc-365559, our highly recommended monoclonal alternatives to  $\alpha_{1D}$ -AR (H-142).