SANTA CRUZ BIOTECHNOLOGY, INC.

α_{1A}-AR (H-136): sc-28982

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

α_{1A}-adrenergic receptors (α_{1A}-ARs) mediate actions in the sympathetic nervous system through the binding of the catecholamines, epinephrine and norepinephrine. α_{1A}-AR couples to $G_{q/11}$ and regulates blood pressure due to changes in vascular tone and cardiac output. Alternative splicing of the ADRA1A gene generates four isoforms with distinct C-termini, and the different expression profile of these subtypes produces distinct patterns of activation. α_{1A}-AR transcripts are abundant in heart, brain, liver and prostate. α_{1A}-AR transcript sizes of 6.0, 4.0, 3.0, and 2.0 kb have been detected in liver. Transcripts of 6.0, 4.0 and 3.0 kb have been detected in heart, and transcripts of 6.0 and 4.0 kb have been detected in prostate.

REFERENCES

1. Hirasawa, A., et al. 1993. Cloning, functional expression and tissue distribution of human cDNA for the α_{1C}-adrenergic receptor. Biochem. Biophys. Res. Commun. 195: 902-909.
2. Chang, D.J., et al. 1998. Molecular cloning, genomic characterization and expression of novel human α_{1A}-adrenoceptor isoforms. FEBS Lett. 422: 279-283.

CHROMOSOMAL LOCATION

Genetic locus: ADRA1A (human) mapping to 8p21.2; Adra1a (mouse) mapping to 14 D1.

SOURCE

α_{1A}-AR (H-136) is a rabbit polyclonal antibody raised against amino acids 331-466 mapping within a C-terminal cytoplasmic domain of α_{1A}-AR of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

α_{1A}-AR (H-136) is recommended for detection of α_{1A}-AR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

α_{1A}-AR (H-136) is also recommended for detection of α_{1A}-AR in additional species, including equine.

Suitable for use as control antibody for α_{1A}-AR siRNA (h): sc-39858, α_{1A}-AR siRNA (m): sc-39859, α_{1A}-AR shRNA Plasmid (h): sc-39858-SH, α_{1A}-AR shRNA Plasmid (m): sc-39859-SH, α_{1A}-AR shRNA (h) Lentiviral Particles: sc-39858-V and α_{1A}-AR shRNA (m) Lentiviral Particles: sc-39859-V.

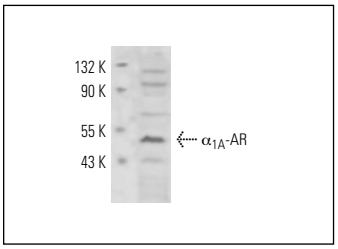
Molecular Weight of α_{1A}-AR: 51.5 kDa.

Positive Controls: PC-3 cell lysate: sc-2220 or HL-60 whole cell lysate: sc-2209.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/ 2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



α_{1A}-AR (H-136): sc-28982. Western blot analysis of α_{1A}-AR expression in PC-3 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Yang, X., et al. 2008. Regulation of apoptosis-inducing factor-mediated, cisplatin-induced apoptosis by Akt. Br. J. Cancer 98: 803-808.
2. Tsang, S., et al. 2008. Testosterone protects rat hearts against ischaemic insults by enhancing the effects of α_1-adrenoceptor stimulation. Br. J. Pharmacol. 153: 693-709.
3. Kikkawa, Y., et al. 2010. Impaired feedback regulation of the receptor activity and the myofilament Ca^{2+} sensitivity contributes to increased vascular reactiveness after subarachnoid hemorrhage. J. Cereb. Blood Flow Metab. 30: 1637-1650.

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.