

APLNR (H-300): sc-33823

BACKGROUND

The apelin receptor (APLNR) is a G protein-coupled integral membrane protein exhibiting a hypothalamic distribution in brain, glial cells, astrocytes and neuronal subpopulations. APLNR is bound by its cognate neuropeptide ligand, apelin, promoting receptor internalization to the nucleus and dose-dependent inhibition of forskolin-induced cAMP production. However, deletion studies of the apelin agonist have shown that internalization is not mandatory for decreasing vasopressin release, a hypotensive action of APLNR signaling. Further evidence for functional dissociation of APLNR stimulation and internalization was exhibited *in vitro* using mutational studies of a nuclear localization signal sequence. These findings may suggest the presence of multiple, functionally-differing conformational states for the receptor. Stress studies in rodents have shown APLNR is under negative regulation by glucocorticoids and may be involved in controlling hypothalamic function. APLNR also functions as an alternate coreceptor with CD4 for HIV-1 infection.

CHROMOSOMAL LOCATION

Genetic locus: APLNR (human) mapping to 11q12.1; Agtr1 (mouse) mapping to 2 D.

SOURCE

APLNR (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of APLNR 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.

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.

APPLICATIONS

APLNR (H-300) is recommended for detection of APLNR 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).

APLNR (H-300) is also recommended for detection of APLNR in additional species, including equine, canine and porcine.

Suitable for use as control antibody for APLNR siRNA (h): sc-44732, APLNR siRNA (m): sc-44733, APLNR shRNA Plasmid (h): sc-44732-SH, APLNR shRNA Plasmid (m): sc-44733-SH, APLNR shRNA (h) Lentiviral Particles: sc-44732-V and APLNR shRNA (m) Lentiviral Particles: sc-44733-V.

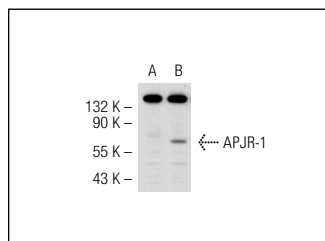
Molecular Weight of APLNR: 42 kDa.

Positive Controls: APJR-1 (h): 293T Lysate: sc-115189.

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



APLNR (H-300): sc-33823. Western blot analysis of APJR-1 expression in non-transfected: sc-117752 (A) and human APJR-1 transfected: sc-115189 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Frier, B.C., et al. 2009. The effects of apelin treatment on skeletal muscle mitochondrial content. *Am. J. Physiol. Regul. Integr. Comp. Physiol.* 297: R1761-R1768.
- Piairo, P., et al. 2011. The apelinergic system in the developing lung: expression and signaling. *Peptides* 32: 2474-2483.
- Than, A., et al. 2012. Apelin secretion and expression of apelin receptors in 3T3-L1 adipocytes are differentially regulated by angiotensin type 1 and type 2 receptors. *Mol. Cell. Endocrinol.* 351: 296-305.
- Pang, H., et al. 2014. The complex regulation of tanshinone IIA in rats with hypertension-induced left ventricular hypertrophy. *PLoS ONE* 9: e92216.
- Pang, H., et al. 2014. Effect of apelin on the cardiac hemodynamics in hypertensive rats with heart failure. *Int. J. Mol. Med.* 34: 756-764.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **APLNR (Y-18): sc-73713**, our highly recommended monoclonal alternative to APLNR (H-300).