SANTA CRUZ BIOTECHNOLOGY, INC.

AVP Receptor V2 (H-80): sc-30027

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Vasopressin (AVP), the antidiuretic hormone, is a cyclic nonpeptide that is involved in the regulation of body fluid osmolality. AVP mediates its effects through a family of G protein-coupled receptors, the vasopressin receptors type V1a, V2 and V3 (also designated V1b). The AVP receptor V1a is responsible for several functions, including blood vessel constriction, liver glycogenolysis and platelet adhesion. It is detected as a full length protein and a shorter protein, which results from proteolytic cleavage of its amino terminus. The V1a receptor is coupled to $G_{q/11}$ protein, which increases the intracellular calcium concentration. The human AVP receptor V2 gene maps to chromosome Xq28 and is expressed in lung and kidney. Mutations in the V2 receptor result in nephrogenic diabetes insipidus (NDI), a rare X-linked disorder characterized by the inability of the kidney to concentrate urine in response to AVP. The AVP Receptor V2 activates the G_s protein and the cyclic AMP second messenger system. The AVP Receptor V3 is preferentially expressed in the pituitary and stimulates the release of adrenocorticotropic hormone (ACTH) in response to AVP by mobilizing intracellular calcium stores. AVP receptor antagonists may have potential therapeutic effects in hypertension, congestive heart failure, nephrotic syndrome and ACTH-secreting tumors.

REFERENCES

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2. Sugimoto, T., Saito, M., Mochizuki, S., Watanabe, Y., Hashimoto, S. and Kawashima, H. 1994. Molecular cloning and functional expression of a cDNA encoding the human V1b vasopressin receptor. J. Biol. Chem. 269: 27088-27092.
3. Fay, M.J., Du, J., Yu, X. and North, W.G. 1996. Evidence for expression of vasopressin V2 receptor mRNA in human lung. Peptides 17: 477-481.
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CHROMOSOMAL LOCATION

Genetic locus: AVPR2 (human) mapping to Xq28; Avpr2 (mouse) mapping to X A7.3.

SOURCE

AVP Receptor V2 (H-80) is a rabbit polyclonal antibody raised against amino acids 1-80 mapping at the N-terminus of AVP Receptor V2 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

AVP Receptor V2 (H-80) is recommended for detection of AVP Receptor V2 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).

Suitable for use as control antibody for AVP Receptor V2 siRNA (h): sc-40275, AVP Receptor V2 siRNA (m): sc-40276, AVP Receptor V2 shRNA Plasmid (h): sc-40275-SH, AVP Receptor V2 shRNA Plasmid (m): sc-40276-SH, AVP Receptor V2 shRNA (h) Lentiviral Particles: sc-40275-V and AVP Receptor V2 shRNA (m) Lentiviral Particles: sc-40276-V.

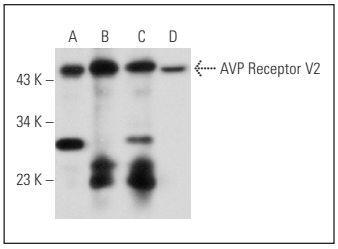
Molecular Weight of AVP Receptor V2: 45-55 kDa.

Positive Controls: mouse kidney extract: sc-2255, mouse lung extract: sc-2390 or mouse heart extract: sc-2254.

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



AVP Receptor V2 (H-80): sc-30027. Western blot analysis of AVP Receptor V2 expression in mouse kidney (**A**), mouse lung (**B**) and mouse heart (**C**) tissue extracts and NIH/3T3 whole cell lysate (**D**).

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.