

AVP Receptor V3 (H-90): sc-30026

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 Gq/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 Gs protein and the cyclic AMP second messenger system. The AVP receptor V3 is preferentially expressed in the pituitary and stimulates the release of adrenocorticotrophic 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

1. Thibonnier, M., et al. 1994. Molecular cloning, sequencing, and functional expression of a cDNA encoding the human V1a vasopressin receptor. *J. Biol. Chem.* 269: 3304-3310.
2. Sugimoto, T., et al. 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., et al. 1996. Evidence for expression of vasopressin V2 receptor mRNA in human lung. *Peptides* 17: 477-481.
4. Phalipou, S., et al. 1997. Mapping peptide-binding domains of the human V1a vasopressin receptor with a photoactivatable linear peptide antagonist. *J. Biol. Chem.* 272: 26536-26544.
5. Mircic, G.M., et al. 1998. Hormones of the posterior region of the hypophyseal gland. *Srp. Arh. Celok. Lek.* 126: 111-118.

CHROMOSOMAL LOCATION

Genetic locus: AVPR1B (human) mapping to 1q32.1; Avpr1b (mouse) mapping to 1 E4.

SOURCE

AVP Receptor V3 (H-90) is a rabbit polyclonal antibody raised against amino acids 181-270 mapping within an internal region of AVP Receptor V3 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.

RESEARCH USE

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

APPLICATIONS

AVP Receptor V3 (H-90) is recommended for detection of AVP Receptor V3 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 V3 siRNA (h): sc-40277, AVP Receptor V3 siRNA (m): sc-40278, AVP Receptor V3 shRNA Plasmid (h): sc-40277-SH, AVP Receptor V3 shRNA Plasmid (m): sc-40278-SH, AVP Receptor V3 shRNA (h) Lentiviral Particles: sc-40277-V and AVP Receptor V3 shRNA (m) Lentiviral Particles: sc-40278-V.

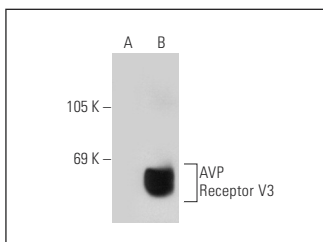
Molecular Weight of AVP Receptor V3: 47 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210 or AVP Receptor V3 (m): 293 Lysate: sc-178317.

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 V3 (H-90): sc-30026. Western blot analysis of AVP Receptor V3 expression in non-transfected: sc-110760 (A) and mouse AVP Receptor V3 transfected: sc-178317 (B) 293 whole cell lysates.

STORAGE

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

PROTOCOLS

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