

AVP Receptor V1a (H-70): sc-30025

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 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.

CHROMOSOMAL LOCATION

Genetic locus: AVPR1A (human) mapping to 12q14.2; Avpr1a (mouse) mapping to 10 D2.

SOURCE

AVP Receptor V1a (H-70) is a rabbit polyclonal antibody raised against amino acids 349-418 mapping within a C-terminal cytoplasmic domain of AVP Receptor V1a 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 V1a (H-70) is recommended for detection of AVP Receptor V1a 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). AVP Receptor V1a (H-70) is also recommended for detection of AVP Receptor V1a in additional species, including equine.

Suitable for use as control antibody for AVP Receptor V1a siRNA (h): sc-29767, AVP Receptor V1a siRNA (m): sc-29768, AVP Receptor V1a siRNA (r): sc-270154, AVP Receptor V1a shRNA Plasmid (h): sc-29767-SH, AVP Receptor V1a shRNA Plasmid (m): sc-29768-SH, AVP Receptor V1a shRNA Plasmid (r): sc-270154-SH, AVP Receptor V1a shRNA (h) Lentiviral Particles: sc-29767-V, AVP Receptor V1a shRNA (m) Lentiviral Particles: sc-29768-V and AVP Receptor V1a shRNA (r) Lentiviral Particles: sc-270154-V.

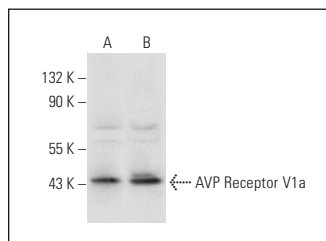
Molecular Weight of glycosylated AVP Receptor V1a: 70-80 kDa.

Molecular Weight of AVP Receptor V1a: 43 kDa.

STORAGE

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

DATA



AVP Receptor V1a (H-70): sc-30025. Western blot analysis of AVP Receptor V1a expression in C2C12 (A) and A-375 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Syed, N., et al. 2007. Arginine vasopressin increases glutamate release and intracellular Ca²⁺ concentration in hippocampal and cortical astrocytes through two distinct receptors. *J. Neurochem.* 103: 229-237.
2. Mechsner, S., et al. 2010. Possible roles of oxytocin receptor and vasopressin-1α receptor in the pathomechanism of dyspareunia and dysmenorrhea in patients with adenomyosis uteri. *Fertil. Steril.* 94: 2541-2546.
3. Oláh, T., et al. 2011. Trisk 32 regulates IP(3) receptors in rat skeletal myoblasts. *Pflügers Arch.* 462: 599-610.
4. Wang, F.F., et al. 2012. Plasma corticotrophin response to desmopressin in patients with Cushing's disease correlates with the expression of vasopressin receptor 2, but not with that of vasopressin receptor 1 or 3, in their pituitary tumours. *Clin. Endocrinol.* 76: 253-263.

RESEARCH USE

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

PROTOCOLS

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

MONOS
Satisfaction
Guaranteed

Try **AVP Receptor V1a (7G8): sc-134276**, our highly recommended monoclonal alternative to AVP Receptor V1a (H-70).