SANTA CRUZ BIOTECHNOLOGY, INC.

AVP Receptor V1a (7G8): sc-134276

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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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.
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CHROMOSOMAL LOCATION

Genetic locus: AVPR1A (human) mapping to 12q14.2.

SOURCE

AVP Receptor V1a (7G8) is a mouse monoclonal antibody raised against a partial recombinant protein mapping within amino acids 1-52 of AVP Receptor V1a protein of human origin.

PRODUCT

Each vial contains 50 µg IgG_{2a} kappa light chain in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

AVP Receptor V1a (7G8) is recommended for detection of AVP Receptor V1a of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

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

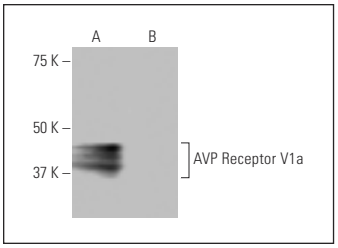
Molecular Weight of AVP Receptor V1a: 43 kDa.

Positive Controls: human AVP Receptor V1a transfected 293T whole cell lysate or SHP-77 whole cell lysate: sc-364258.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



AVP Receptor V1a (7G8): sc-134276. Western blot analysis of AVP Receptor V1a expression in human AVP Receptor V1a transfected (**A**) and non-transfected (**B**) 293T 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.

RESEARCH USE

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

PROTOCOLS

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