SANTA CRUZ BIOTECHNOLOGY, INC.

AVP Receptor V1a (721CT25.2.1): sc-517313

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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7. Thibonnier, M., et al. 2001. The basic and clinical pharmacology of non-peptide vasopressin receptor antagonists. Annu. Rev. Pharmacol. Toxicol. 41: 175-202.
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CHROMOSOMAL LOCATION

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

STORAGE

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

SOURCE

AVP Receptor V1a (721CT25.2.1) is a mouse monoclonal antibody raised against purified His-tagged AVP Receptor V1a protein fragment of human origin.

PRODUCT

Each vial contains 100 µg IgM in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

AVP Receptor V1a (721CT25.2.1) 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) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

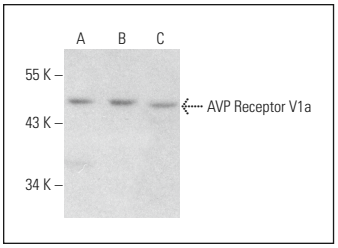
Suitable for use as control antibody for AVP Receptor V1a siRNA (h): sc-29767, AVP Receptor V1a siRNA (m): sc-29768, AVP Receptor V1a shRNA Plasmid (h): sc-29767-SH, AVP Receptor V1a shRNA Plasmid (m): sc-29768-SH, AVP Receptor V1a shRNA (h) Lentiviral Particles: sc-29767-V and AVP Receptor V1a shRNA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

Molecular Weight of AVP Receptor V1a: 43 kDa.

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

Positive Controls: A549 cell lysate: sc-2413, HL-60 whole cell lysate: sc-2209 or K-562 whole cell lysate: sc-2203.

DATA



AVP Receptor V1a (721CT25.2.1): sc-517313. Western blot analysis of AVP Receptor V1a expression in A549 (**A**), HL-60 (**B**) and K-562 (**C**) whole cell lysates.

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.