SANTA CRUZ BIOTECHNOLOGY, INC.

VPAC1 (N-15): sc-15958

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The vasoactive intestinal peptide (VIP) and pituitary adenylate cylase-activating polypeptide (PACAP) belong to a superfamily of peptide hormones that include glucagon, secretin and growth hormone releasing hormone. The effects of VIP and PACAP are mediated by three G protein coupled receptors, VPAC1, VPAC2 and the PACAP receptor (also designated PAC1-R). The VPAC receptors have equal affinities for VIP and PACAP, which stimulate the activation of adenylyl cyclase. Both VPAC1 and VPAC2 are abundantly expressed in brain and T cells, where they modulate neuronal differentiation and T cell activation, respectively The PACAP receptor is a seven transmembrane protein that produces at least eight isoforms by alternative splicing. Each isoform is associated with a specific signaling pathway and a specific expression pattern. The PACAP receptor, which is thought to play an integral role in brain development, preferentially binds PACAP in order to stimulate a cAMP-protein kinase A signaling pathway .

CHROMOSOMAL LOCATION

Genetic locus: VIPR1 (human) mapping to 3p22.1; Vipr1 (mouse) mapping to 9 F4.

SOURCE

VPAC1 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of VPAC1 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.

Blocking peptide available for competition studies, sc-15958 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

VPAC1 (N-15) is recommended for detection of VPAC1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

VPAC1 (N-15) is also recommended for detection of VPAC1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for VPAC1 siRNA (h): sc-40281, VPAC1 siRNA (m): sc-40282, VPAC1 shRNA Plasmid (h): sc-40281-SH, VPAC1 shRNA Plasmid (m): sc-40282-SH, VPAC1 shRNA (h) Lentiviral Particles: sc-40281-V and VPAC1 shRNA (m) Lentiviral Particles: sc-40282-V.

Molecular Weight of VPAC1 degylcosylated: 47 kDa.

Molecular Weight of VPAC1 glycosylated: 58 kDa.

Positive Controls: TE671 cell lysate: sc-2416, SK-N-SH cell lysate: sc-2410 or Caki-1 cell lysate: sc-2224.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Joo, K.M., et al. 2004. Distribution of vasoactive intestinal peptide and pituitary adenylate cyclase-activating polypeptide receptors (VPAC1, VPAC2, and PAC-1 receptor) in the rat brain. J. Comp. Neurol. 476: 388-413.
2. Joo, K.M., et al. 2005. Reduced immunoreactivities of a vasoactive intestinal peptide and pituitary adenylate cyclase-activating polypeptide receptor (VPAC1 receptor) in the cerebral cortex, hippocampal region, and amygdala of aged rats. Brain Res. 1064: 166-172.

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.