

# VPAC1 (V-20): sc-31633

## BACKGROUND

The vasoactive intestinal peptide (VIP) and pituitary adenylate cyclase-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 (V-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain 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-31633 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

VPAC1 (V-20) is recommended for detection of VPAC1 of human, rat and, to a lesser extent, mouse 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).

VPAC1 (V-20) is also recommended for detection of VPAC1 in additional species, including equine and porcine.

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

Molecular Weight of deglycosylated VPAC1: 47 kDa.

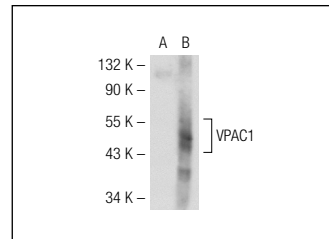
Molecular Weight of glycosylated VPAC1: 58 kDa.

Positive Controls: VPAC1 (h): 293T Lysate: sc-116969, 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



VPAC1 (V-20): sc-31633. Western blot analysis of VPAC1 expression in non-transfected: sc-117752 (A) and human VPAC1 transfected: sc-116969 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Gabbay-Benziv, R., et al. 2012. Vasoactive intestinal peptide and its receptors in human ovarian cortical follicles. PLoS ONE 7: e37015.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **VPAC1 (B-4): sc-377152**, our highly recommended monoclonal alternative to VPAC1 (V-20).