

VPAC1 (H-130): sc-30019

BACKGROUND

The vasoactive intestinal peptide (VIP) and the 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 (H-130) is a rabbit polyclonal antibody raised against amino acids 31-160 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.

APPLICATIONS

VPAC1 (H-130) 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), 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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 deglycosylated VPAC1: 47 kDa.

Molecular Weight of glycosylated VPAC1: 58 kDa.

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

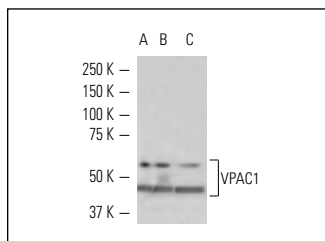
STORAGE

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.

DATA



VPAC1 (H-130): sc-30019. Western blot analysis of VPAC1 expression in TE671 (A), SK-N-SH (B) and Caki-1 (C) whole cell lysates.



VPAC1 (H-130): sc-30019. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocytes.

SELECT PRODUCT CITATIONS

- Kim, B.J., et al. 2006. Vasoactive intestinal polypeptide inhibits pacemaker activity via the nitric oxide-cGMP-protein kinase G pathway in the interstitial cells of Cajal of the murine small intestine. *Mol. Cells* 21: 337-342.
- Valiante, S., et al. 2008. Pituitary adenylate cyclase-activating polypeptide, vasoactive intestinal polypeptide and their receptors: distribution and involvement in the secretion of *Podarcis sicula* adrenal gland. *J. Endocrinol.* 196: 291-303.
- Casanueva, F.F., et al. 2008. Growth hormone-releasing hormone as an agonist of the ghrelin receptor GHS-R1a. *Proc. Natl. Acad. Sci. USA* 105: 20452-20457.
- Valiante, S., et al. 2009. Distribution and molecular evolution of the neuropeptide pituitary adenylate cyclase-activating polypeptide (PACAP) and its receptors in the lizard *Podarcis sicula* (Squamata, Lacertidae). *J. Mol. Neurosci.* 39: 144-156.
- Castorina, A., et al. 2010. Effects of PACAP and VIP on hyperglycemia-induced proliferation in murine microvascular endothelial cells. *Peptides* 31: 2276-2283.
- Csati, A., et al. 2012. Distribution of vasoactive intestinal peptide, pituitary adenylate cyclase-activating peptide, nitric oxide synthase, and their receptors in human and rat sphenopalatine ganglion. *Neuroscience* 202: 158-168.
- Giunta, S., et al. 2012. Early changes in pituitary adenylate cyclase-activating peptide, vasoactive intestinal peptide and related receptors expression in retina of streptozotocin-induced diabetic rats. *Peptides* 37: 32-39.


 MONOS
Satisfaction
Guaranteed

Try **VPAC1 (B-4): sc-377152**, our highly recommended monoclonal alternative to VPAC1 (H-130).