

# PACAP Receptor (C-18): sc-15965

## 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.

## REFERENCES

1. Shen, S., et al. 2000. Overexpression of the human VPAC2 receptor in the suprachiasmatic nucleus alters the circadian phenotype of mice. *Proc. Natl. Acad. Sci. USA* 97: 11575-1180.
2. Shioda, S. 2000. Pituitary adenylate cyclase-activating polypeptide (PACAP) and its receptors in the brain. *Kaibogaku Zasshi* 75: 487-507.
3. Bajo, A.M., et al. 2000. Expression of vasoactive intestinal peptide (VIP) receptors in human uterus. *Peptides* 21: 1383-1388.
4. Karacay, B., et al. 2000. Regulation of vasoactive intestinal peptide receptor expression in developing nervous systems. *Ann. N.Y. Acad. Sci.* 921: 165-174.

## CHROMOSOMAL LOCATION

Genetic locus: ADCYAP1R1 (human) mapping to 7p14.3; Adcyap1r1 (mouse) mapping to 6 B3.

## SOURCE

PACAP Receptor (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of PACAP Receptor 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-15965 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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.

## APPLICATIONS

PACAP Receptor (C-18) is recommended for detection of PACAP Receptor 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), 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).

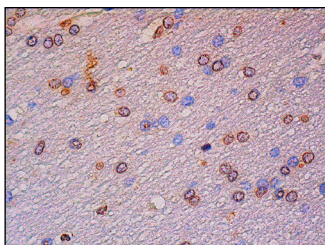
PACAP Receptor (C-18) is also recommended for detection of PACAP Receptor in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PACAP Receptor siRNA (h): sc-40279, PACAP Receptor siRNA (m): sc-40280, PACAP Receptor shRNA Plasmid (h): sc-40279-SH, PACAP Receptor shRNA Plasmid (m): sc-40280-SH, PACAP Receptor shRNA (h) Lentiviral Particles: sc-40279-V and PACAP Receptor shRNA (m) Lentiviral Particles: sc-40280-V.

Molecular Weight of PACAP Receptor: 60 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

## DATA



PACAP Receptor (C-18): sc-15965. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing nuclear membrane staining of glial cells.

## SELECT PRODUCT CITATIONS

1. Abu-Hamdan, M.D., et al. 2006. Pituitary adenylyl cyclase-activating polypeptide (PACAP) and its receptor (PAC1-R) in the cochlea: evidence for specific transcript expression of PAC1-R splice variants in rat microdissected cochlear subfractions. *Neuroscience* 140: 147-161.
2. Drescher, M.J., et al. 2006. Pituitary adenylyl cyclase-activating polypeptide (PACAP) and its receptor (PAC1-R) are positioned to modulate afferent signaling in the cochlea. *Neuroscience* 142: 139-164.
3. 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.


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Try **PACAP Receptor (1B5): sc-100315**, our highly recommended monoclonal alternative to PACAP Receptor (C-18).