ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

PACAP Antibodies

Cat. # PACAP11-P	**Human** PACAP control peptide # 1	**SIZE**: 100 ug
Cat. # PACAP11-A	**Rabbit** Anti-Human PACAP IgG # 1 (aff pure)	**SIZE**: 100 ug

Vasoactive intestinal peptide (**VIP**) is a 28 amino acid peptide (human, chr 6q26-q27). Expressed and secreted by neurons innervating primary and secondary immune organs such as lymph nodes with a Mol.wt of 20kD. VIP is a potent neurotrophic factor causes vasodilation, lowers arterial blood pressure, and relaxes the smooth muscle of trachea, stomach and gall bladder. VIP also modulates several T-lymphocyte activities including motility, cytokine production, proliferation and apoptosis, VIP exerts its biological activity by binding to two closely related class II G-protein-coupled receptors VPAC-1 and VPAC-2 beside this VIP has its own receptors **VIPR1&2** (Vasoactive Intestinal Polypeptide Receptor 1&2) and **VIPRRP** (VIP receptor-gene repressor protein). VIP shows similarities to glucagon, secretin and gastric inhibitory peptide (GIP) as such it has been considered a member of the glucagon-secretin family. The VIP is 100% conserved in mouse, rat and human. VIP is considered to be a viable candidate for the development of treatments for rheumatoid arthritis, since treatment with VIP significantly reduced incidence of severity of arthritis, the therapeutic effect of VIP was associated with down regulation of both inflammatory and autoimmune components of the disease.

Pituitary adenylate cyclase-activating polypeptide (PACAP) is a bioactive peptide (human 176aa, 175 each in mouse and rat) that was originally isolated from ovine hypothalamus on the basis of its ability to stimulate adenylate cyclase and functions as a neurotransmitter and neuromodulator The N-terminal amino acid sequence of PACAP shows 68% identity with VIP and more limited similarity with growth hormone-releasing hormone.

Source of Antigen and Antibodies

Antigen	11-aa peptide from Human **PACAP** (1); **Designation (PACAP11-P, control peptide or blocking peptide**) conjugated to KLH; epitope location ~ C-terminus
Ab Host/type	Rabbit, Polyclonal unpurified antiserum (#**PACAP11**-S) and IgG, purified over antigen-agarose (Cat # **PACAP11**-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve control IgG	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG
100 ug/100ul solution lyophilized powder
Supplied in **Buffer**: PBS+0.1% BSA

Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide
100 ug/100 ul solution lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.
Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

Western Blotting (1-10 ug/ml for affinity pure antibody using ECL technique).

ELISA: Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (0.5-1 ug/ml for affinity pure).

Histochemistry & Immunofluorescence: Not tested. We recommend the use of aff pure IgG at 2-20 ug/ml.

Specificity & Cross-reactivity

The human PACAP11-P control peptide shows 83% sequence identity with mouse and 81% with rat. No significant homology is detected with other species. Antibody cross-reactivity in various species has not been studied. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol at the web site).

General References: (1) Bodner,M (1985) PNA,82, 3548-3551; Delgado, M (2001) Nature Med, 7, 563-568; Hamelink, C et al(2002) PNA Sci,99, 461-466; Hashimoto, H. et al(2001) PNA sci 98,13355-60; Gotoh, E.(1998) Biochem. Int, 17, 555-562.

*This product is for In vitro research use only.

Related material available from ADI

Antibodies and Peptides: VIP, VIPR1&2 VIPRRP, Glucagon, GLP.

PACAP11-A-P 71208A

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