

Product Specification Sheet

PACAP Related Peptide (PRP) Antibodies

Cat. # PRP11-P	Human PRP control peptide # 1	SIZE: 100 ug
Cat. # PRP11-A	Rabbit Anti-Human PRP 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 downregulation 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.

PRP (PACAP Related Peptide), a 29 amino-acid region of the PACAP precursor protein, has been synthesized in quantities sufficient for biological and structural studies. PRP has a distinct biological activity on the gallbladder that is similar to PACAP, but opposite to that of VIP and its related peptide, PHM.

Source of Antigen and Antibodies

Antigen	11-aa peptide from Human PRP (1); Designation (PRP11-P or control peptide) epitope location ~ C-terminus
Ab Host/type	Rabbit, Polyclonal Aff pure IgG (cat # PRP11-A) purified over antigen-agarose column
2-ab	Goat Anti-rabbit IgG-HRP cat # 20320 (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 -20°C and powder at 4°C or -20°C.

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

Stability: 6-12 months at -20°C or below.

Shipping: 4°C 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 PRP11-P control peptide shows 81% sequence identity with sheep, pig and 80% with chicken PACAP. 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.

PRP11-A-P 71208A