

Product Specification Sheet

**PACAP Related Peptide (PRP) Antibodies**

Cat. # PRP12-P	Mouse PRP control/blocking peptide # 2	<b>SIZE:</b> 100 ug
Cat. # PRP12-A	<b>Rabbit</b> Anti-Mouse PRP IgG # 2 (aff pure)	<b>SIZE:</b> 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.

**FUNCTION:** Stimulates adenylate cyclase in pituitary cells.  
**SUBCELLULAR LOCATION:** Secreted.  
**SIMILARITY:** Belongs to the glucagon family.  
**Protein name** Pituitary adenylate cyclase-activating polypeptide [Precursor]  
**Synonym** PACAP  
**Gene name** Name: Adcyap1; Synonyms: Pacap

**Source of Antigen and Antibodies**

<b>Antigen</b>	12-aa peptide from Mouse <b>PRP</b> (1); (protein accession #O70176 , refs 1) <b>Designation (PRP12-P or control peptide)</b> conjugated to KLH; Epitope location ~C-terminus
<b>Ab Host/type</b>	Rabbit, Polyclonal Aff pure IgG ( <b>cat # PRP12-A</b> ) purified over the antigen column
<b>Ab Format</b>	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available
<b>-ve control</b>	# 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 Mouse PRP12-P control peptide shows no significant homology 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.

**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.

PRP12-P-A 70912J