

Product Specification Sheet

**VIPR Antibodies**

Cat. # VIPR11-P	<b>Mouse</b> VIPR control peptide # 1	<b>SIZE:</b> 100 ug
Cat. # VIPR11-A	<b>Rabbit</b> Anti-Mouse VIPR IgG # 1 (aff pure)	<b>SIZE:</b> 100 ug

Vasoactive intestinal peptide (VIP) is a 28-aminoacid 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.

**VIPR1** is a 457aa (chr. 3p22) glycosylated receptor in human (459aa in rat, 459aa in mouse) has a signal peptide sequence with several transmembrane domains. The VIP receptor 1 is also termed as type II PACAP receptor, RCD1. It is predominantly expressed in cholinergic presynaptic neurons of the central nervous system and in peripheral peptidergic neurons innervating diverse tissues. The Highly conserved aspartate 68, tryptophan 73 and glycine 109 in the N-terminal extracellular domain of the human VIP receptor are essential for its ability to bind VIP. VIPR1 appears in two isoforms, a long form/ hIVR5 and a short form/ hIVR8 formed after alternative splicing.

**Source of Antigen and Antibodies**

<b>Antigen</b>	17-aa peptide from <b>Mouse VIPR (1); Designation (VIPR11-P, control peptide)</b> epitope location ~ N-terminus
<b>Ab Host/type</b>	Rabbit, Polyclonal Aff pure IgG ( <b>cat # VIPR11-A</b> )
<b>2-ab</b>	<b>Goat Anti-rabbit IgG-HRP cat # 20320</b> (AP, biotin, FITC conjugates also available)
<b>-ve control IgG</b>	<b># 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control</b>

**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 mouse VIPR11-P control peptide is 100% conserved in rat, and 90% in human. 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..

**General References:** (1) Lin Pei (1998), JBC,273, 19902-19908; Lin pei(2000) JBC, 275, 1176-1182; Bodner,M (1985) PNA,82, 3548-3551; Delgado, M (2001) Nature Med, 7, 563-568; 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, VIPRRP, Glucagon, GLP.

VIPR11-A-P

71208A

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