Vasoactive intestinal peptide (VIP) is a 28 amino acid peptide (human, chr 6q26-q27) originally isolated from porcine duodenum. VIP is present not only in gastrointestinal tract but also in neural tissues, and secondary immune organs such as lymph nodes. 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 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 glucagon-secretin family consists, at present, of six peptides: glucagon, secretin, vasoactive intestinal peptide (VIP), glucose-dependent insulinotropic peptide, peptide hormone with N-terminal histidine and C-terminal isoleucine amide (PHI-27), and growth hormone releasing factor. Both VIP and PHI-27 are synthesized as parts of the same precursor polyprotein in human neuroblastoma cells. The human counterpart of PHI-27 has a C-terminal methionine and is, therefore, designated PHI-27. VIP and PHI-27 were originally isolated from porcine intestinal mucosa. DNA sequences coding for the VIP and PHI-27 hormones are located in two different exons.

PHM-27 Human sequence

Source of Antigen and Antibodies

<table>
<thead>
<tr>
<th>Antigen</th>
<th>7-aa peptide (Lys-Lys-Tyr-Leu-Glu-Ser-Leu-Met-NH2) from Human PHM (1); Designation (PHM11-P, control peptide), epitope location ~ C-terminus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ab Host/type</td>
<td>Rabbit, Polyclonal Aff pure IgG (cat # PHM11-A) purified over antigen-agarose column</td>
</tr>
<tr>
<td>2-ab</td>
<td>Goat Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates also available)</td>
</tr>
<tr>
<td>-ve control IgG</td>
<td># 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control</td>
</tr>
</tbody>
</table>

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.

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 PHM11-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.


Related material available from ADI

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

PHM11-A-P 70925A