Human Prostatic Acid Phosphatase/ACPP Antibody
Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF6240

**DESCRIPTION**

<table>
<thead>
<tr>
<th>Species Reactivity</th>
<th>Human</th>
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</thead>
<tbody>
<tr>
<td>Specificity</td>
<td>Detects human Prostatic Acid Phosphatase/ACPP in direct ELISAs and Western blots.</td>
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<tr>
<td>Source</td>
<td>Polyclonal Sheep IgG</td>
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<tr>
<td>Purification</td>
<td>Antigen Affinity-purified</td>
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</tbody>
</table>

**Immunogen**
Mouse myeloma cell line NS0-derived recombinant human Prostatic Acid Phosphatase/ACPP Lys33-Qln379
Accession # P15309

**Formulation**
Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.
*Small pack size (SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

**APPLICATIONS**

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

<table>
<thead>
<tr>
<th>Recommended Concentration</th>
<th>Sample</th>
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<tbody>
<tr>
<td>Western Blot</td>
<td>1 μg/mL See Below</td>
</tr>
<tr>
<td>Immunohistochemistry</td>
<td>5-15 μg/mL See Below</td>
</tr>
</tbody>
</table>

**ELISA**
This antibody functions as an ELISA detection antibody when paired with Mouse Anti-Human Prostatic Acid Phosphatase/ACPP Monoclonal Antibody (Catalog # MAB62401).
This product is intended for assay development on various assay platforms requiring antibody pairs. We recommend the Human Prostatic Acid Phosphatase/ACPP DuoSet ELISA Kit (Catalog # DY6240-05) for convenient development of a sandwich ELISA.

**DATA**

**Western Blot**
Detection of Human Prostatic Acid Phosphatase/ACPP by Western Blot. Western blot shows lysates of LNCaP human prostate cancer cell line. PVDF Membrane was probed with 1 μg/mL of Human Prostatic Acid Phosphatase/ACPP Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6240) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Prostatic Acid Phosphatase/ACPP at approximately 50-55 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

**Immunohistochemistry**
Prostatic Acid Phosphatase/ACPP in Human Prostate. Prostatic Acid Phosphatase/ACPP was detected in immersion fixed paraffin-embedded sections of human prostate using Human Prostatic Acid Phosphatase/ACPP Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6240) at 3 μg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Specific staining was localized to the cytoplasm of epithelial cells. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.
**ELISA**

**Human Prostatic Acid Phosphatase/ACPP ELISA**

**Standard Curve.**

Recombinant Human Prostatic Acid Phosphatase/ACPP protein was serially diluted 2-fold and captured by Mouse Anti-Human Prostastic Acid Phosphatase/ACPP Monoclonal Antibody (Catalog # MAB62401) coated on a Clear Polystyrene Microplate (Catalog # DY990).

Sheep Anti-Human Prostatic Acid Phosphatase/ACPP Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6240) was biotinylated and incubated with the protein captured on the plate. Detection of the standard curve was achieved by incubating Streptavidin-HRP (Catalog # DY998) followed by Substrate Solution (Catalog # DY999) and stopping the enzymatic reaction with Stop Solution (Catalog # DY994).

**PREPARATION AND STORAGE**

**Reconstitution**

Sterile PBS to a final concentration of 0.2 mg/mL.

**Shipping**

The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C.*

**Stability & Storage**

- Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
  - 12 months from date of receipt, -20 to -70 °C as supplied.
  - 1 month, 2 to 8 °C under sterile conditions after reconstitution.
  - 6 months, -20 to -70 °C under sterile conditions after reconstitution.

**BACKGROUND**

ACPP (Acid phosphatase, prostate; also PAP and ACP3) is a 45-52 kDa glycoprotein member of the histidine acid phosphatase family of enzymes. It exists as a 95-100 kDa non-disulfide linked homodimer that hydrolyzes phosphate esters under low pH to generate free phosphate. ACPP is expressed by prostate epithelium and pain-detecting spinal cord neurons. In the spinal cord, ACPP dephosphorylates AMP. This generates adenosine which acts as a strong analgesic agent. Mature human ACPP is 354 amino acids (aa) in length (aa 33-386). It contains one histidine phosphatase domain (aa 34-332), plus a nucleophile acceptor site at His44, and a proton donor site at Asp290. There are two potential alternative splice variants. One shows a deletion of aa 153-185, while another is transmembrane (previously called TMPase) and shows a 38 aa substitution for the C-terminal seven amino acids. Over aa 33-379, human ACPP shares 84% aa identity with mouse ACPP.