

## DESCRIPTION

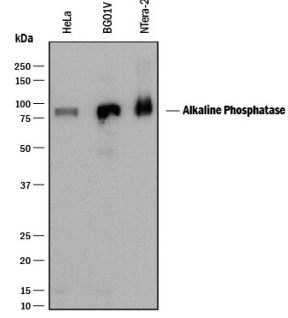
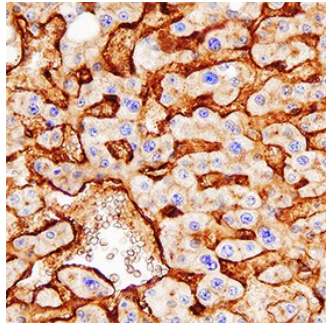
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Alkaline Phosphatase/ALPL in direct ELISA and Western Blots.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 928929
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Alkaline Phosphatase/ALPL Leu18-Ser502 Accession # P05186
<b>Formulation</b>	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.

	Recommended Concentration	Sample
<b>Western Blot</b>	0.25 µg/mL	See Below
<b>Immunohistochemistry</b>	8-25 µg/mL	See Below

## DATA

<p><b>Western Blot</b></p> 	<p><b>Detection of Human Alkaline Phosphatase/ALPL by Western Blot.</b> Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line, BG01V human embryonic stem cells, and Ntera-2 human testicular embryonic carcinoma cell line. PVDF membrane was probed with 0.25 µg/mL of Mouse Anti-Human Alkaline Phosphatase/ALPL Monoclonal Antibody (Catalog # MAB29092) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for Alkaline Phosphatase/ALPL at approximately 80 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p><b>Immunohistochemistry</b></p>  <p><b>Alkaline Phosphatase/ALPL in Human Liver.</b> Alkaline Phosphatase/ALPL was detected in immersion fixed paraffin-embedded sections of human liver using Mouse Anti-Human Alkaline Phosphatase/ALPL Monoclonal Antibody (Catalog # MAB29092) at 0.3 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell &amp; Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to bile canaliculi. View our protocol for <a href="#">Chromogenic IHC Staining of Paraffin-embedded Tissue Sections</a>.</p>
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## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

Four distinct genes encode alkaline phosphatases (APs) in humans (1). The ALPL gene encodes the liver/bone/kidney isozyme, also known as the tissue-nonspecific AP (TNAP). In comparison, ALPI, ALPP and ALPL2 encode intestinal, placental and placental-like or germ cell APs, respectively. The serum levels of human APs are useful tumor markers (2). There are many mutations in the ALPL gene, leading to different forms of hypophosphatasia, characterized by poorly mineralized cartilage and bones (3). The native ALPL is a glycosylated homodimer attached to the membrane through a GPI-anchor. The C-terminal pro peptide (residues 503-524) is not present in the mature form.

### References:

1. Le Du, M-H. and J.L. Millan (2002) *J. Biol. Chem.* **277**:49808.
2. Millan, J.L. and W.H. Fishman (1995) *Crit. Rev. Clin. Lab. Sci.* **32**:1.
3. Di Mauro, S. *et al.* (2002) *J. Bone Miner. Res.* **17**:1383.