Acid Phosphatase Assay Kit (Colorimetric) ab83367

Overview

Product name: Acid Phosphatase Assay Kit (Colorimetric)
Detection method: Colorimetric
Sample type: Urine, Serum, Plasma, Other biological fluids, Tissue Extracts, Cell Lysate, Cell culture media
Assay type: Enzyme activity
Sensitivity: > 0.001 mM
Range: 0.001 mM - 1 mM
Assay time: 1h 10m

Product overview: Acid Phosphatase Assay Kit ab83367 is a high sensitivity, simple, direct and HTS-ready colorimetric assay designed to measure acid phosphatase activity in serum and other samples.

The acid phosphatase assay protocol uses p-nitrophenyl phosphate (pNPP) as a phosphatase substrate which turns yellow (absorbance max 405 nm) when dephosphorylated by acid phosphatase.

Acid phosphatase assay protocol summary:
- add samples and standards to wells
- add pNPP to samples
- add acid phosphatase enzyme to standards
- incubate for 60 min
- add stop solution
- analyze with microplate reader

Notes: Acid phosphatases (AP) dephosphorylate phosphate groups from phosphate esters under acid conditions. Different acid phosphatase isozymes are found in different organs, and their serum levels are used as a diagnostic for disease in the corresponding organs. Elevated prostatic acid phosphatase levels may indicate the presence of prostate cancer and elevated tartrate-resistant acid phosphatase levels may indicate the bone disease.

pNPP Assays
pNPP assays are a class of phosphatase assays using p-nitrophenyl phosphate (pNPP) as a phosphatase substrate. They can be used to measure alkaline phosphatase, neutral phosphatase, and acid phosphatase activity. These different types of phosphatases are active respectively in alkaline, neutral, and acid assay buffers. pNPP assays include Alkaline Phosphatase Assay Kit ab83369 and Acid Phosphatase Assay Kit ab83367.
Platform: Microplate reader

Properties

Storage instructions: Store at -20°C. Please refer to protocols.

<table>
<thead>
<tr>
<th>Components</th>
<th>Identifier</th>
<th>500 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP Assay buffer</td>
<td>NM</td>
<td>1 x 100ml</td>
</tr>
<tr>
<td>AP Enzyme (Lyophilised)</td>
<td>Green</td>
<td>1 vial</td>
</tr>
<tr>
<td>pNPP Substrate (10 tablets)</td>
<td>Red</td>
<td>1 vial</td>
</tr>
<tr>
<td>Stop Solution</td>
<td>WM</td>
<td>1 x 10ml</td>
</tr>
</tbody>
</table>

Relevance: Acid phosphatases (AP) dephosphorylate phosphate groups from phosphate esters under acid conditions. Different acid phosphatase isozymes are found in different organs, and their serum levels are used as a diagnostic for disease in the corresponding organs. Elevated prostatic acid phosphatase levels may indicate the presence of prostate cancer and elevated tartrate-resistant acid phosphatase levels may indicate bone disease.


Images

AP Enzyme samples 40 minute assay

Functional Studies - Acid Phosphatase Colorimetric Assay Kit (ab83367)
p-Nitrophenol (pNP) standard curve

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