Phospholipase D Activity Assay Kit (Colorimetric) ab183306

**Overview**

**Product name**: Phospholipase D Activity Assay Kit (Colorimetric)

**Detection method**: Colorimetric

**Sample type**: Tissue, Adherent cells, Suspension cells

**Assay type**: Enzyme activity

**Species reactivity**

- **Reacts with**: Human
- **Predicted to work with**: Mammal

**Product overview**

Phospholipase D Activity Assay Kit (Colorimetric) (ab183306) provides a simple and sensitive method of measuring phospholipase D (PLD) activity using colorimetry (OD 570 nm). In this assay, PLD cleaves choline from phosphatidylcholine. The free choline is then oxidized by the PLD enzyme mix to generate an intermediate which reacts with the PLD Probe to generate color that is detected at OD = 570 nm. This high-throughput adaptable assay kit can detect as little as 1.0 mU/mL PLD activity in cells and tissues.

**Notes**

Phospholipase D (PLD) is a key player in phospholipid metabolism. PLD hydrolyzes the phosphodiester bond of the glycerophospholipids, resulting in the production of phosphatidic acid and a free headgroup. PLD activity regulates the actin cytoskeleton, vesicle trafficking for secretion and endocytosis, and receptor signaling. Abnormalities in PLD activity and expression have been associated with Alzheimer's disease, stroke, cancer and other brain disorders.

**Tested applications**

**Suitable for**: Functional Studies

**Platform**

Microplate

**Properties**

**Storage instructions**

Store at -20°C. Please refer to protocols.

**Components**

<table>
<thead>
<tr>
<th>Components</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choline Standard (Lyophilized)</td>
<td>1 vial</td>
</tr>
<tr>
<td>PLD Assay Buffer</td>
<td>1 x 25ml</td>
</tr>
<tr>
<td>PLD Enzyme Mix (Lyophilized)</td>
<td>1 vial</td>
</tr>
</tbody>
</table>
**Function**

Implicated as a critical step in numerous cellular pathways, including signal transduction, membrane trafficking, and the regulation of mitosis. May be involved in the regulation of perinuclear intravesicular membrane traffic.

**Tissue specificity**

Expressed abundantly in the pancreas and heart and at high levels in brain, placenta, spleen, uterus and small intestine.

**Sequence similarities**

Belongs to the phospholipase D family.
Contains 1 PH domain.
Contains 2 PLD phosphodiesterase domains.
Contains 1 PX (phox homology) domain.

**Cellular localization**


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**Applications**

Our **Abpromise guarantee** covers the use of **ab183306** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
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<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>Functional Studies</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
</tbody>
</table>

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**Images**

**Typical Choline Standard calibration curve.**

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**Components**

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<tr>
<th>Component</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLD Positive Control (Lyophilized)</td>
<td>1 vial</td>
</tr>
<tr>
<td>PLD Probe (in DMSO)</td>
<td>1 x 200µl</td>
</tr>
<tr>
<td>PLD Substrate</td>
<td>1 x 100µl</td>
</tr>
</tbody>
</table>

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**Abreviews**

**Phospholipase D Activity Assay Kit (ab183306)**
Phospholipase D Activity Assay Kit (ab183306)

PLD activity in liver lysate (5 µL) & Positive Control (1 µL).

Please note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

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