Overview

Product name: Universal Kinase Assay Kit (Fluorometric) ab138879

Detection method: Fluorescent

Sample type: Cell Lysate, Purified protein

Assay type: Enzyme activity

Sensitivity: < 0.3 µM

Range: 1 µM - 300 µM

Species reactivity: Reacts with: Mammals, Other species

Product overview: Universal Kinase Assay Kit (Fluorometric) (ab138879) is based on monitoring ADP formation, which is directly proportional to enzyme phosphotransferase activity and is measured fluorimetrically. This enzyme-coupled kit provides a fast, simple, and homogeneous assay to measure kinase activities. It is a non-radioactive and no wash method to detect the amount of ADP produced from enzyme reaction. Its characteristics of high sensitivity (<0.3 µM ADP) and broad ATP tolerance (1-300 µM) make it an ideal kit for determining kinase Michaelis-Menten kinetics and for screening and identifying kinase inhibitors. The assay can be performed in a convenient 96-well or 384-well microtiter plate format and easily adapted to automation without a separation step.

Notes:

Protein kinases are the enzymes that transfer a phosphate group from a phosphate donor to an acceptor amino acid in a substrate protein. Kinases are of great interest to researchers involved in drug discovery. Most of the commercial protein kinase assay kits are based on monitoring either the phosphopeptide formation or the ATP depletion. For the kinase assay kits that are based on the detection of phosphopeptides, one has to spend time and efforts to identify an optimized peptide substrate while the ATP depletion method suffers various interferences due to the use of luciferase that are inhibited or activated by various biological compounds.

Platform:

Microplate reader

Properties

Storage instructions: Store at -80°C. Please refer to protocols.
Sample Standard Curve for ADP

ADP dose response was measured with ab138879 in a solid black 384-well plate using a fluorescence microplate reader. As low as 0.3 µM ADP can be detected with 15, 30 minutes and 1 hour incubation (Z' factor =0.65).

The Universal Kinase Assay Kit is based on the monitoring of ADP formation, which is directly proportional to enzyme phosphotransferase activity and is measured fluorimetrically.

Components

<table>
<thead>
<tr>
<th>Component</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADP Assay Buffer</td>
<td>1 x 10ml</td>
</tr>
<tr>
<td>ADP Sensor Buffer</td>
<td>1 x 5ml</td>
</tr>
<tr>
<td>ADP Sensor I (Light-sensitive)</td>
<td>1 vial</td>
</tr>
<tr>
<td>ADP Sensor II</td>
<td>1 x 2.5ml</td>
</tr>
<tr>
<td>ADP Standard</td>
<td>1 vial</td>
</tr>
<tr>
<td>DMSO</td>
<td>1 x 100µl</td>
</tr>
</tbody>
</table>

Images

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