ALDH Activity Assay Kit (Colorimetric) ab155893

Overview

Product name: ALDH Activity Assay Kit (Colorimetric)
Detection method: Colorimetric
Sample type: Cell culture supernatant, Serum, Plasma, Cell Lysate, Tissue Culture Media
Assay type: Enzyme activity (quantitative)
Sensitivity: < 0.5 mU/well
Assay time: 0h 30m
Species reactivity: Reacts with: Mammals, Other species

Product overview: ALDH Activity Assay Kit (Colorimetric) (ab155893) is a simple, fast and reliable method to quantify the ALDH enzymatic activity. In this assay, acetaldehyde is oxidized by ALDH generating NADH which then reduces a colorless probe to a colored product with strong absorbance at 450 nm. The assay can detect < 0.5 mU of ALDH activity in a variety of samples.

ALDH assay protocol summary:
- add samples and standards to wells
- add reaction mix and incubate for 20-60 min
- analyze with a microplate reader at 5 min and 20-60 min

Notes: This product is manufactured by BioVision, an Abcam company and was previously called K731 Aldehyde Dehydrogenase Activity Colorimetric Assay Kit. K731-100 is the same size as the 100 test size of ab155893.

The NAD-dependent Aldehyde Dehydrogenase (ALDH) plays a vital role in cellular detoxification. It oxidizes various aldehydes and generates the corresponding carboxylic acid. ALDH have been found in every cellular compartment. Based on its structure and function, ALDH comprises 3 major classes in mammals: Class 1 and Class 3 (the tumor form) are located in the cytosol and include both constitutive and induced forms; Class 2 is located in the mitochondria and only exists as the constitutive form. In humans, the ALDH superfamily consists of 19 genes. The mutation of ALDH genes (loss of function) causes human diseases such as Type II hyperprolinemia, pyridoxine-dependent seizure and hyperammonemia. Recent studies show that increased ALDH activity leads to several types of malignancies, serves as a cancer stem cell marker and correlates with poor prognosis.

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

<table>
<thead>
<tr>
<th>Components</th>
<th>100 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetaldehyde</td>
<td>1 x 0.5ml</td>
</tr>
<tr>
<td>ALDH Assay Buffer</td>
<td>1 x 25ml</td>
</tr>
<tr>
<td>ALDH Positive Control</td>
<td>1 vial</td>
</tr>
<tr>
<td>ALDH Substrate Mix</td>
<td>1 vial</td>
</tr>
<tr>
<td>NADH Standard</td>
<td>1 vial</td>
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Properties

Components

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Images

Standard curve (60 minutes incubation) showing mean of duplicates (+/- SD) with background reads subtracted.

ALDH Activity Assay kit (ab155893)

Typical OD of the different positive controls measured over 1 hour.

ALDH activity in Positive Control
ALDH activity measured in human biological fluids (T₁=5 min; T₂=60 min), showing activity (mU) per mL of tested sample, background signal subtracted.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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