

Isopropanol Dehydrogenase Colorimetric Activity Assay Kit

Product Information

Cat.No.

Kit-2133

Product Overview

Isopropanol Dehydrogenase Activity Colorimetric Assay Kit provides a convenient tool for sensitive detection of the ADH1- NADP in a variety of samples. In this assay, Isopropanol gets converted to Acetone and NADPH in the presence of NADP⁺. This results in the development of colour in the presence of the developer. This colour is proportional to the ADH1-NADP levels in the sample and can be measured at $\lambda = 450$ nm. This assay detects ADH1-NADP activity as low as 0.001 mU in samples.

Size

100 assays

Description

NADP-dependent Isopropanol Dehydrogenase (ADH1-NADP, EC:1.1.1.80) belongs to the superfamily of alcohol dehydrogenases (Alcohol DHs, ADHs, EC 1.1.1.1) with a preference for medium chain secondary alcohols, such as 2-butanol and isopropanol. Isopropanol dehydrogenase facilitates the conversion between secondary alcohols to aldehydes and ketones with the reduction of NADP⁺ to NADPH.

Applications

Measurement of Isopropanol Dehydrogenase (ADH1-NADP) activity in various cells. Measurement of "NADP-dependent alcohol dehydrogenases" activity with broad substrate specificity in various tissues/cells.

Target Species

Mammalian samples. Bacterial, yeast or protozoan samples: *Entamoeba histolytica*, *Clostridium beijerinckii*, *Mycoplasma pneumonia*, etc.

Storage

Isopropanol Dehydrogenase Colorimetric Activity Assay Kit

Store the kit at -20°C, protected from light. Briefly centrifuge vials prior to opening. Read the entire protocol before performing the assay. ADH1-NADP Assay Buffer: Warm to room temperature before use. Store at either 4°C or -20°C. ADH1-NADP Developer: Reconstitute the Developer with 0.9 ml of ddH₂O. Pipette up and down several times to completely dissolve the pellet (Do not vortex). Aliquot and store at -20°C. Keep on ice while in use. Use within two months. ADH1-NADP Positive Control: Dilute the Positive Control with 100 µl Assay Buffer and mix thoroughly. Aliquot and store directly at -20°C. Keep on ice while in use. Use within two months. NADPH Standard: Reconstitute NADPH Standard with 200 µl pure DMSO to generate 1 mM NADPH Standard solution. Aliquot and store at -20°C. Keep on ice while in use. Use within two months.

Kit Components

ADH1-NADP Assay Buffer: 25 ml ADH1-NADP Substrate: 1 ml ADH1-NADP Developer: 1 vial ADH1-NADP Positive Control: 10 µl NADPH Standard: 1 vial

Detection method Absorbance (450 nm)

Compatible Sample Types

• Bacterial, yeast or protozoan samples: *Entamoeba histolytica*, *Clostridium beijerinckii*, *Mycoplasma pneumonia*, etc. • Animal tissues: such as liver, pancreas, small intestine, etc. • Animal cells.

Features & Benefits

• Simple, colorimetric protocol. • Detects ADH1-NADP activity as low as 0.001 mU in samples. • Compatible with multiple sample types.
