CREATIVE BIOMART®
Assay Kit

Hexokinase Inhibitor Screening Kit

Product Information

Cat.No. Kit-2144

Product Overview

In the Hexokinase Inhibitor Screening kit, glucose is converted to glucose-6-phosphate by hexokinase; the glucose-6-phosphate is oxidized by glucose-6-phosphate dehydrogenase to form NADH, which reduces a colorless probe to a colored product with strong absorbance at 450 nm. In the presence of a Hexokinase inhibitor, the reaction is impeded/abolished resulting in decrease or total loss of absorbance. This assay kit can be used to screen/study/characterize the potential inhibitors of Hexokinase. The assay is simple, high-throughput adaptable and can be performed within 30 min.

Size

100 assays

Description

Hexokinases (HK) play an important role in glucose metabolism. Hexokinases phosphorylate glucose and generate glucose-6-phosphate for glycolysis. Hexokinases have four isoforms (HK-I, II, III and IV). HK-I, HK-II and HK-III have low Km, while HK-IV has 100 fold high Km. Hexokinase deficiency leads to severe human diseases such as X-linked muscular dystrophy and a rare autosomal recessive hemolytic anemia. On the other hand, increased hexokinase activity is detected in various tumors and is associated with metastasis.

Applications

Screening/characterizing/studying potential inhibitors of Hexokinase

Storage

Store kit at -20°C, protected from light. Briefly centrifuge small vials prior to opening. Read entire protocol before performing the assay.HK Assay Buffer: Bring to room temperature before use. Store at -20°C or 4°C.HK Coenzyme and HK Developer: Reconstitute each with 220 µl dH2O. Pipette up and down to dissolve completely. Store at -20°C. Use within two months. Keep on ice while in use.HK Converter: Reconstitute with 220 µl HK Assay Buffer. Aliquot and store at -20°C. Avoid freeze/thaw.

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Keep on ice while in use. Usewithin two months.Hexokinase: Reconstitute with 160 µl HK Assay Buffer. Aliquot and store at -20°C. Avoid freeze/thaw. Keep on ice while in use. Usewithin two months.HK Inhibitor Control: Reconstitute with 100 µl dH2O. Aliquot and store at -20°C. Avoid freeze/thaw. Keep on ice while in use. Use within two months.

Kit Components

HK Assay Buffer: 25 mlHK Substrate: 1 mlHK Coenzyme: 1 vialHK Converter: 1 vialHK Developer: 1 vialHexokinase: 1 vialHK Inhibitor Control: 1 vial

Detection method Absorbance at 450 nm

Compatible Sample Types

Variable: Inhibitors, small molecules, proteins, etc.

Features & Benefits

• Simple and High throughput adaptable• Colorimetric Detection• Screen within 30 min

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