

## 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  $K_m$ , while HK-IV has 100 fold high  $K_m$ . 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  $-20^{\circ}\text{C}$ , 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  $-20^{\circ}\text{C}$  or  $4^{\circ}\text{C}$ . HK Coenzyme and HK Developer: Reconstitute each with 220  $\mu\text{l}$  dH<sub>2</sub>O. Pipette up and down to dissolve completely. Store at  $-20^{\circ}\text{C}$ . Use within two months. Keep on ice while in use.

## Hexokinase Inhibitor Screening Kit

Converter: Reconstitute with 220 µl HK Assay Buffer. Aliquot and store at -20°C. Avoid freeze/thaw. Keep on ice while in use. Use within 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. Use within two months. HK Inhibitor Control: Reconstitute with 100 µl dH<sub>2</sub>O. Aliquot and store at -20°C. Avoid freeze/thaw. Keep on ice while in use. Use within two months.

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### Kit Components

HK Assay Buffer: 25 ml HK Substrate: 1 ml HK Coenzyme: 1 vial HK Converter: 1 vial HK Developer: 1 vial Hexokinase: 1 vial HK Inhibitor Control: 1 vial

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**Detection method** Absorbance at 450 nm

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### Compatible Sample Types

Variable: Inhibitors, small molecules, proteins, etc.

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### Features & Benefits

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

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