

# Hexokinase Activity Assay Kit (Fluorometric) ab211103

1 References 画像数 3

### 製品の概要

|         |                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 製品名     | Hexokinase Activity Assay Kit (Fluorometric)                                                                                                                                                                                                                                                                                                                                                                                             |
| 検出方法    | Fluorescent                                                                                                                                                                                                                                                                                                                                                                                                                              |
| サンプルの種類 | Cell Lysate, Tissue Lysate                                                                                                                                                                                                                                                                                                                                                                                                               |
| アッセイタイプ | Enzyme activity (quantitative)                                                                                                                                                                                                                                                                                                                                                                                                           |
| 検出感度    | 2 µU                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 種交差性    | 交差種: Mammals, Other species                                                                                                                                                                                                                                                                                                                                                                                                              |
| 製品の概要   | The Hexokinase Activity Assay Kit (Fluorometric) (ab211103) provides a simple, sensitive and quick method for monitoring hexokinase (HK) activity in cells, serum, and animal or plant tissues. In this assay, HK converts glucose into glucose-6-phosphate, which in turn undergoes a series of reactions and reduces the sensitive probe to generate an intense fluorescent product that can be easily detected at Ex/Em = 535/587 nm. |

This assay can detect as low as 2 µU of HK activity.

|      |                                                                                                                                                                                                                 |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 特記事項 | This product is manufactured by BioVision, an Abcam company and was previously called K769 PicoProbe™ Hexokinase Activity Assay Kit (Fluorometric). K769-100 is the same size as the 100 test size of ab211103. |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Hexokinase (HK, 6-Phosphate glucose kinase, ATP:D-Hexose 6- Phosphotransferase, ATP-dependent hexokinase, EC 1.1.1.49) is responsible for phosphorylating hexoses (six-carbon sugars) to form hexose phosphate. Hexokinases play an important role in glucose metabolism, as glucose is the most important substrate of hexokinases. Hexokinases are found in many organisms including bacteria, plants and mammals. In mammals, there are four isoforms (HK-I, II, III and IV). HK-I, HK-II, and HK-III are referred as “low Km” because of their high affinity for glucose (Km < 1mM), while HK-IV (also known as Glucokinase) has a Km for glucose 100-fold higher and can only phosphorylate glucose when the substrate concentration is high enough.

Hexokinase deficiency leads to diseases such as X-linked muscular dystrophy and rare autosomal recessive hemolytic anemia. On the other hand, increased hexokinase activity is detected in various human tumors and is associated with metastasis.

|            |                   |
|------------|-------------------|
| 試験プラットフォーム | Microplate reader |
|------------|-------------------|

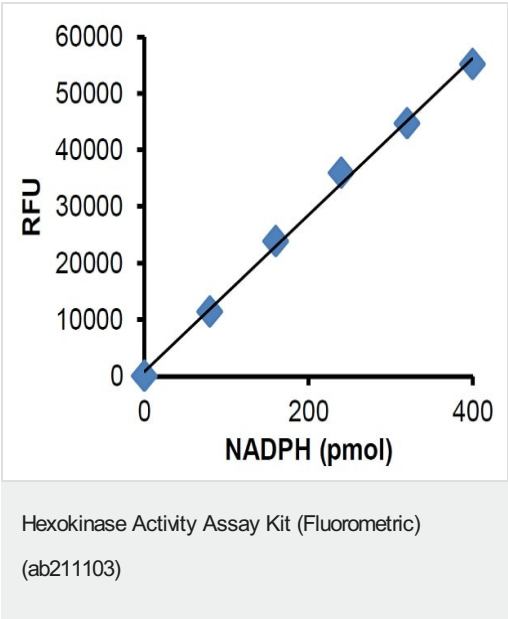
### 製品の特性

保存方法

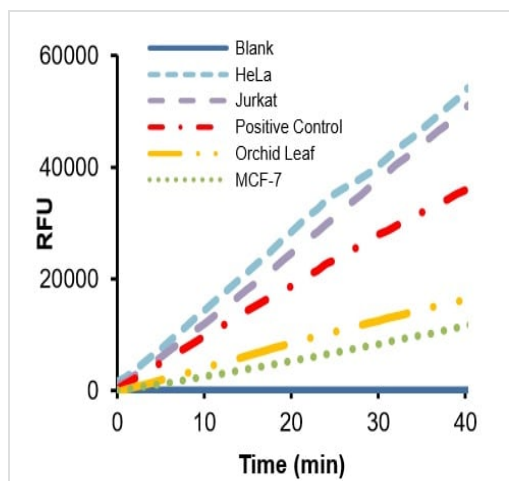
Store at -20°C. Please refer to protocols.

| 内容                        | 100 tests |
|---------------------------|-----------|
| Assay Buffer LX           | 1 x 25ml  |
| ATP II                    | 1 vial    |
| Developer IX              | 1 vial    |
| Development Enzyme Mix IX | 1 vial    |
| HK Positive Control       | 1 vial    |
| HK Substrate              | 1 x 1ml   |
| NADPH Standard            | 1 vial    |
| PicoProbe I               | 1 x 400µl |

画像

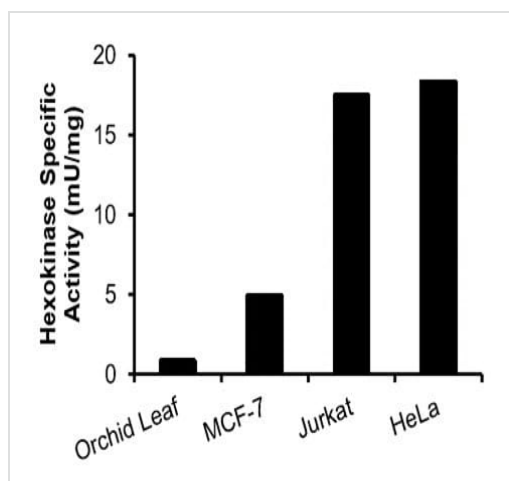


Typical NADPH standard calibration curve.



Kinetic curves showing Hexokinase activity in positive control (included in kit), lysates from HeLa (0.62  $\mu$ g), Jurkat (0.65  $\mu$ g) and MCF-7 cells (0.56  $\mu$ g), and lysates from orchid leaf (4  $\mu$ g).

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(ab211103)



Hexokinase specific activity in lysates from orchid leaf (4  $\mu$ g), MCF-7 (0.56  $\mu$ g), Jurkat (0.65  $\mu$ g) and HeLa cells (0.62  $\mu$ g).

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