

Hexokinase Activity Assay Kit (Fluorometric) ab211103

[1 References](#) [3 Images](#)

Overview

Product name	Hexokinase Activity Assay Kit (Fluorometric)
Detection method	Fluorescent
Sample type	Cell Lysate, Tissue Lysate
Assay type	Enzyme activity (quantitative)
Sensitivity	2 μ U
Species reactivity	Reacts with: Mammals, Other species
Product overview	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 μ U of HK activity.

Notes 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 ($K_m < 1\text{mM}$), while HK-IV (also known as Glucokinase) has a K_m 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.

Platform Microplate reader

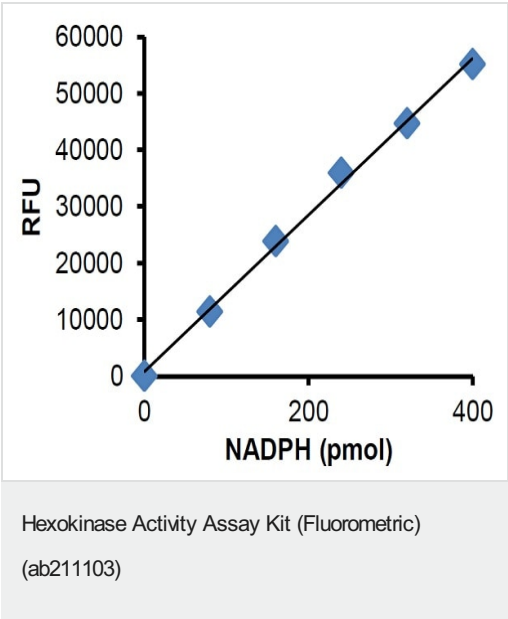
Properties

Storage instructions

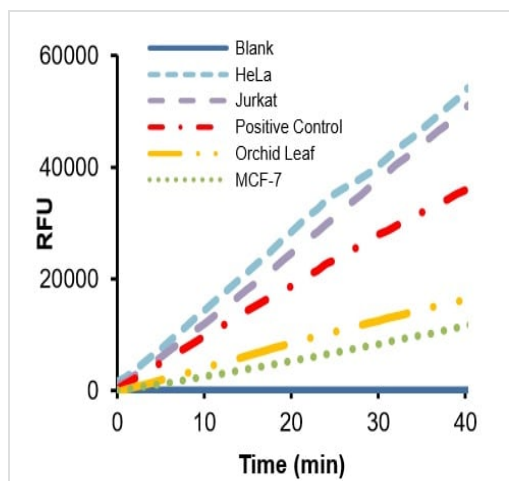
Store at -20°C. Please refer to protocols.

Components	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

Images

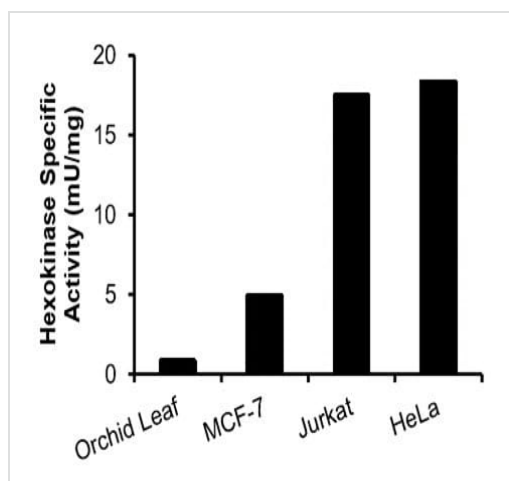


Typical NADPH standard calibration curve.



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

Hexokinase Activity Assay Kit (Fluorometric)
(ab211103)



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

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(ab211103)

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