abcam

Product datasheet

Glucose Assay Kit (Fluorometric, High Sensitivity) ab169559

9 References 2 Images

Overview

Product name	Glucose Assay Kit (Fluorometric, High Sensitivity)
Detection method	Fluorescent
Sample type	Serum, Plasma, Other biological fluids, Tissue, Adherent cells, Suspension cells, Tissue Culture Media
Assay type	Quantitative
Sensitivity	< 0.5 µM
Species reactivity	**Reacts with:** Mammals, Other species
Product overview	Picoprobe Glucose Assay Kit (ab169559) is a simple, rapid, ultra-sensitive assay to measure glucose. It is suitable for high-throughput use. In this assay, D-glucose is enzymatically oxidized to form a product which reacts with a colorless probe to generate the fluorescence (Ex/Em = 535/587 nm). The fluorescence generated is directly proportional to the amount of glucose. This assay kit can detect less than 0.5 µM glucose in various biological samples.
Notes	This product is manufactured by BioVision, an Abcam company and was previously called K688 PicoProbe™ Glucose Fluorometric Assay Kit. K688-100 is the same size as the 100 test size of ab169559. Glucose is the main energy source for virtually all living organisms. Glucose level is a key diagnostic parameter for many metabolic disorders. Measurement of glucose can be very important in both research and drug discovery processes.
Platform	Microplate reader

Properties

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

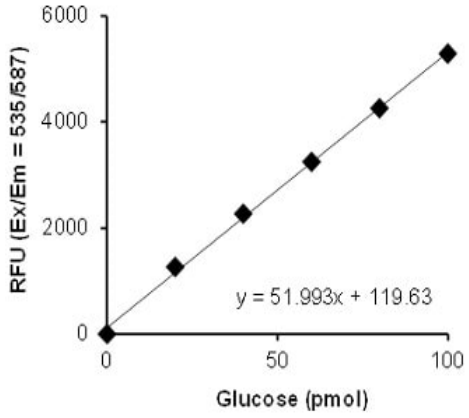
Components	100 tests
Assay Buffer II	1 x 25ml
Glucose Enzyme Mix	1 vial

Components	100 tests
Glucose Standard	1 x 100µl
PicoProbe I	1 x 0.4ml
Substrate Mix I	1 vial

Relevance

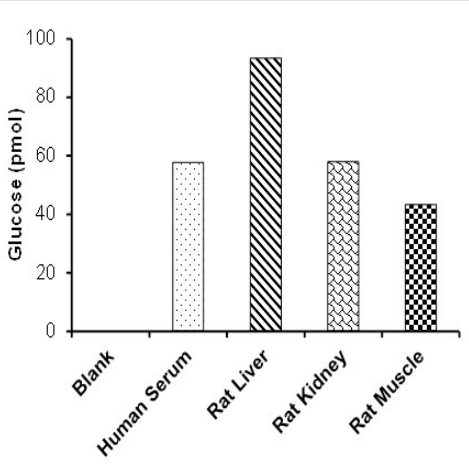
Glucose ($C_6H_{12}O_6$; FW: 180.16) is a ubiquitous energy source in most organisms, from bacteria to humans. The breakdown of carbohydrates produces mono- and disaccharides, most of which is glucose. Through glycolysis and TCA (citric acid cycle), glucose is oxidized to eventually form CO_2 and water, generating the universal energy molecule ATP. Glucose is a primary source of energy for the brain and a critical component in the production of proteins and in lipid metabolism and therefore measurement of glucose level is a key diagnostic parameter for many metabolic disorders.

Images



Glucose standard curve

Representative standard curve.



Measurement of glucose levels in samples

Measurement of glucose levels in human serum (1 µL of 1:10 diluted) and rat tissue lysates from liver, kidney and muscle (0.14 µg, 0.19 µg and 0.93 µg respectively).

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