

Product datasheet

Glucose Assay Kit ab65333

26 References 5 Images

Overview

Product name	Glucose Assay Kit
Sample type	Cell culture supernatant, Urine, Serum, Plasma, Other biological fluids
Assay type	Quantitative
Sensitivity	1 μ M
Range	1 μ M - 10000 μ M
Assay time	0h 40m
Product overview	Glucose Assay Kit (ab65333) measures glucose in various biological samples (e.g., serum, plasma, body fluid, food, growth medium, etc.).

Glucose Enzyme Mix specifically oxidizes glucose to generate a product which reacts with a dye to generate color ($\lambda = 570$ nm) and fluorescence (Ex/Em = 535/587 nm). The generated color and fluorescence is proportionally to the glucose amount.

The method is rapid, simple, sensitive, and suitable for high throughput. The assay is also suitable for monitoring glucose level during fermentation and glucose feeding in protein expression processes. The kit detects 1-10000 μ M glucose samples.

If you have reducing substances in your samples, we recommend using [Glucose Detection Kit II \(ab102517\)](#).

Visit our [FAQs page](#) for tips and troubleshooting.

Review our [Metabolism Assay Guide](#) to learn about assays for metabolites, metabolic enzymes, mitochondrial function, and oxidative stress, and also about how to assay metabolic function in live cells using your plate reader.

Properties

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

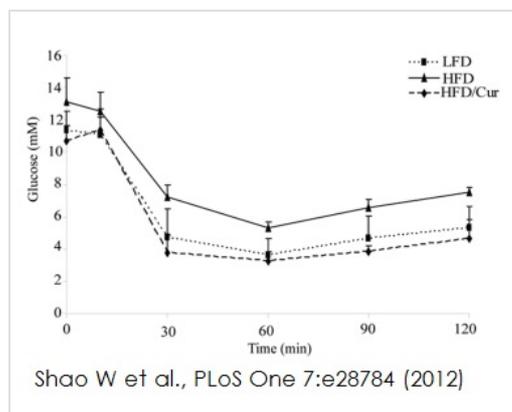
Components	Identifier	100 tests
Assay Buffer	WM	1 x 25ml

Components	Identifier	100 tests
Glucose Enzyme Mix (lyophilized)	Green	1 vial
Glucose Probe (in DMSO)	Red	1 x 200µl
Glucose Standard (100 nmol/µl)	Yellow	1 x 100µl

Relevance

Glucose (C₆H₁₂O₆; 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 CO₂ 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.

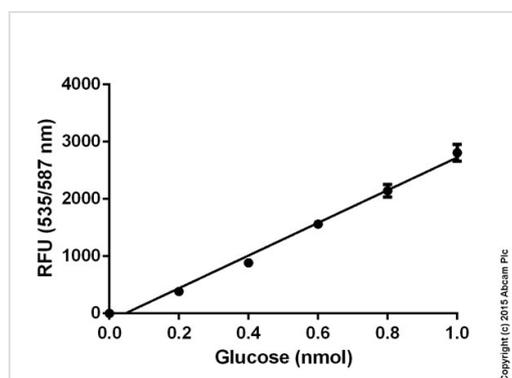
Images



Functional studies- ab65333

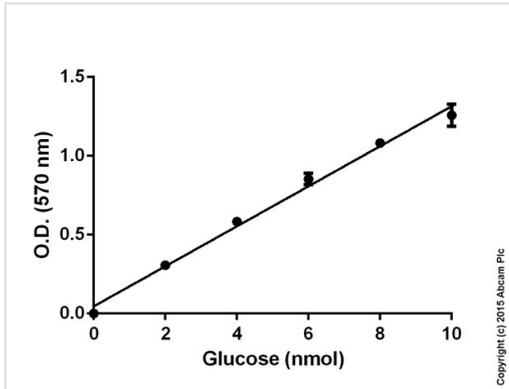
Image from Shao W et al., PLoS One 7(1), Fig 2C. Doi: 10.1371/journal.pone.0028784.

Shao et al investigated the functional outcome of long- term curcumin supplementation on glucose homeostasis. Glucose metabolism was determined in animals with low fat diet (LFD), high fat diet (HFD) and HFD with curcumin feeding using ab65333. Intrapertoneal insulin tolerance tests (IPITT) were conducted at the end of the 26 weeks. It was concluded curcumin improves insulin sensitivity and disposal of glucose.



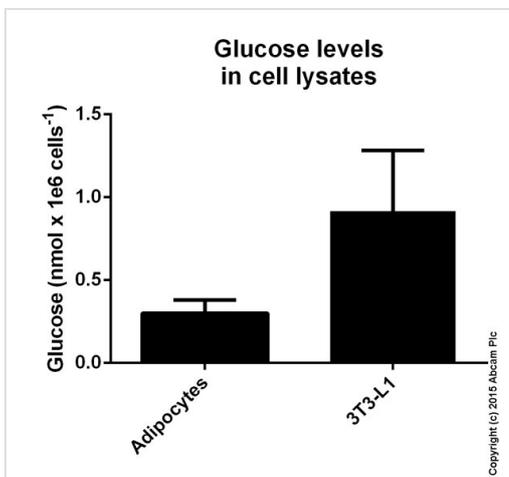
Functional Studies - Glucose Assay Kit (ab65333)

Standard curve: mean of duplicates (+/- SD) with background reads subtracted



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Functional Studies - Glucose Assay Kit (ab65333)

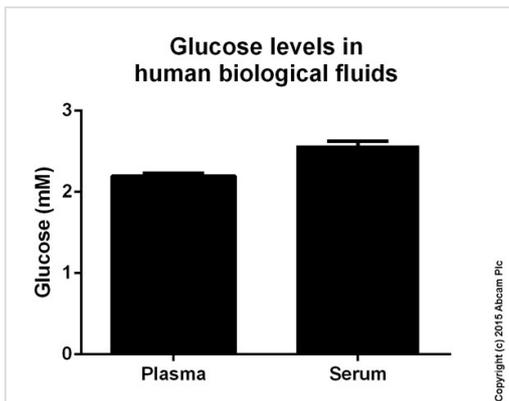


Glucose measured in cell lysates showing quantity (nmol) per million cells.

Samples with the concentration of 2×10^7 cells/mL were used.

Samples were diluted 1.5-13.5 fold and measured colorimetrically.

Functional Studies - Glucose Assay Kit (ab65333)



Glucose measured in human biological fluids showing quantity (μmol) per mL of tested sample. Samples were diluted 13.5 fold and measured colorimetrically.

Functional Studies - Glucose Assay Kit (ab65333)

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