

Glucose 6 Phosphate Dehydrogenase Activity Assay Kit (Fluorometric) ab176722

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概述

产品名称	Glucose 6 Phosphate Dehydrogenase Activity Assay试剂盒(Fluorometric)
检测方法	Fluorescent
样品类型	Urine, Serum, Plasma, Other biological fluids, Whole Blood, Cell Lysate
检测类型	Enzyme activity (quantitative)
灵敏度	>= 0.3 mIU/ml
检测时间	1h 00m
种属反应性	与反应: Mammals, Other species
产品概述	<p>Glucose 6 Phosphate Dehydrogenase Activity Assay Kit (Fluorometric) (ab176722) provides a simple method for detecting glucose 6 phosphate dehydrogenase (G6PD) activity in a variety of biological samples such as serum, plasma and urine, as well as cell extracts. In the assay, G6PD present in the sample converts NADP^+ to NADPH, which can be specifically monitored by a fluorogenic NADPH sensor to yield a highly red fluorescence product. The signal can be easily detected at Ex/Em = 540/590 nm in a fluorescent microplate reader. The fluorescence intensity is proportional to the G6PD activity present in the sample.</p> <p>The assay can detect glucose 6 phosphate dehydrogenase activity from as low as 0.3 mU/mL in a 100 μL reaction volume.</p>
说明	<p>Glucose 6 Phosphate Dehydrogenase (G6PD, G6PDH, EC 1.1.1.49) catalyzes the conversion of glucose-6-phosphate to 6-phosphoglucono-δ-lactone, the first and rate-limiting step in the pentose phosphate pathway (PPP). It is a critical metabolic pathway that supplies reducing energy to cells (such as erythrocytes) by maintaining the level of co-enzyme nicotinamide adenine dinucleotide phosphate (NADPH). The production of NADPH is of great importance for tissues actively engaged in biosynthesis of fatty acids and/or isoprenoids, such as the liver, mammary glands, adipose tissue, and the adrenal glands. The NADPH also maintains the level of glutathione in these cells that helps protect the red blood cells against oxidative damage. Deficiencies in G6PD predispose individuals to non-immune hemolytic anemia.</p>
平台	Microplate reader

性能

存放说明

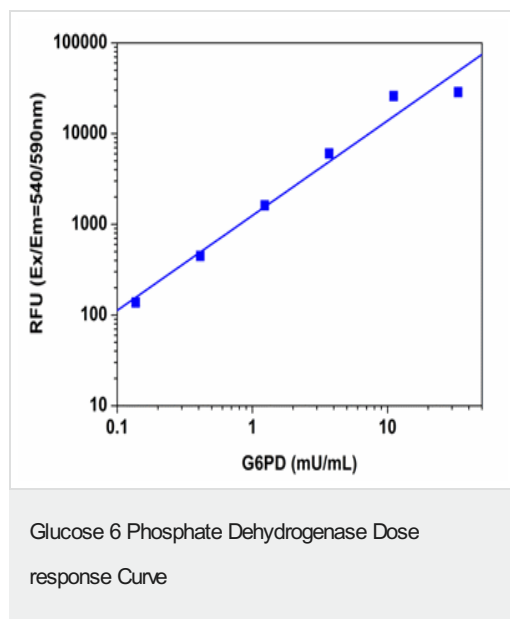
Store at -20°C. Please refer to protocols.

组件	200 tests
Assay Buffer	1 x 10ml
Enzyme Probe	2 vials
G6PD Standard	1 vial
NADP	1 vial

相关性

Glucose 6 phosphate dehydrogenase (G6PDH) is a cytosolic enzyme in the pentose phosphate pathway, a metabolic pathway that supplies reducing energy to cells (such as erythrocytes) by maintaining the level of the co-enzyme nicotinamide adenine dinucleotide phosphate (NADPH). The NADPH in turn maintains the level of glutathione in these cells that helps protect the red blood cells against oxidative damage. Of greater quantitative importance is the production of NADPH for tissues actively engaged in biosynthesis of fatty acids and/or isoprenoids, such as the liver, mammary glands, adipose tissue, and the adrenal glands.

图片



G6PD was measured with Abcam's Glucose 6 Phosphate Dehydrogenase Assay Kit (Fluorometric) (ab176722) in a 96-well black plate using a microplate reader. As low as 0.3 mU/mL Glucose 6 Phosphate Dehydrogenase in 100 μ L volume can be detected with 1 hour incubation.

The concentration of the Glucose-6-Phosphate Dehydrogenase in X-axis is based on the 50 μ L standard, the final in-well concentration should be 1/2 for each point.

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