

## Product datasheet

# Phosphoglucose Isomerase Activity Assay Kit (Colorimetric) ab155897

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### Overview

<b>Product name</b>	Phosphoglucose Isomerase Activity Assay Kit (Colorimetric)
<b>Detection method</b>	Colorimetric
<b>Sample type</b>	Tissue, Adherent cells, Suspension cells, Tissue Homogenate
<b>Assay type</b>	Enzyme activity
<b>Sensitivity</b>	< 0.1 mU/well
<b>Range</b>	2.5 nmol/well - 12.5 nmol/well
<b>Species reactivity</b>	<b>Reacts with:</b> Mammals, Other species
<b>Product overview</b>	<p>Abcam's Phosphoglucose Isomerase Activity Assay Kit (Colorimetric) (ab155897) is an assay where PGI (phosphoglucose isomerase) converts fructose-6-phosphate to glucose-6-phosphate; the glucose-6-phosphate is oxidized by glucose-6-phosphate dehydrogenase to form a product, which reacts with a colorless probe to give strong absorbance at 450 nm. The PGI assay is simple, sensitive and rapid and can detect phosphoglucose isomerase activity less than 0.1 mU/reaction.</p>
<b>Notes</b>	<p>This product is manufactured by BioVision, an Abcam company and was previously called K775 Phosphoglucose Isomerase Activity Colorimetric Assay Kit. K775-100 is the same size as the 100 test size of ab155897.</p> <p>Phosphoglucose isomerase (glucose-6-phosphate isomerase or PGI, EC 5.3.1.9) is an important housekeeping enzyme. PGI catalyzes the interconversion of glucose-6- phosphate to fructose-6- phosphate. PGI performs multiple functions &amp; intracellularly plays key role in both glycolysis and gluconeogenesis. Extracellularly, PGI [also called Autocrine Motility Factor (AMF)] functions as a cytokine, which stimulates cell motility and is associated with tumor development and metastasis. In humans, PGI deficiency causes hemolytic anemia, whereas increased PGI activity is observed in many cancers such as gastrointestinal, kidney and breast cancer. Early detection of abnormal phosphoglucose isomerase activity is crucial for diagnosis, prediction and therapeutic strategy.</p>
<b>Platform</b>	Microplate reader

### Properties

<b>Storage instructions</b>	Store at -20°C. Please refer to protocols.
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Components	100 tests
Assay Buffer V	1 x 27ml
Developer Solution III	1 vial
Development Enzyme Mix IX	1 vial
NADH Standard I	1 vial
Phosphoglucose Isomerase Positive Control	1 vial
Phosphoglucose Isomerase Substrate	1 vial

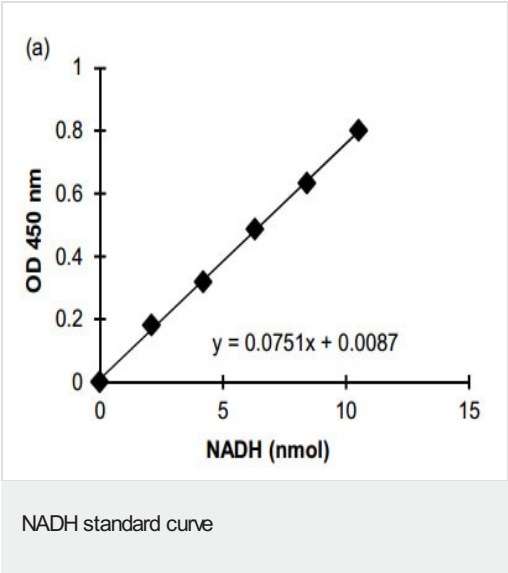
Relevance

This gene belongs to the GPI family whose members encode multifunctional phosphoglucose isomerase proteins involved in energy pathways. The protein encoded by this gene is a dimeric enzyme that catalyzes the reversible isomerization of glucose-6-phosphate and fructose-6-phosphate. The protein functions in different capacities inside and outside the cell. In the cytoplasm, the gene product is involved in glycolysis and gluconeogenesis, while outside the cell it functions as a neurotrophic factor for spinal and sensory neurons. Defects in this gene are the cause of nonspherocytic hemolytic anemia and a severe enzyme deficiency can be associated with hydrops fetalis, immediate neonatal death and neurological impairment.

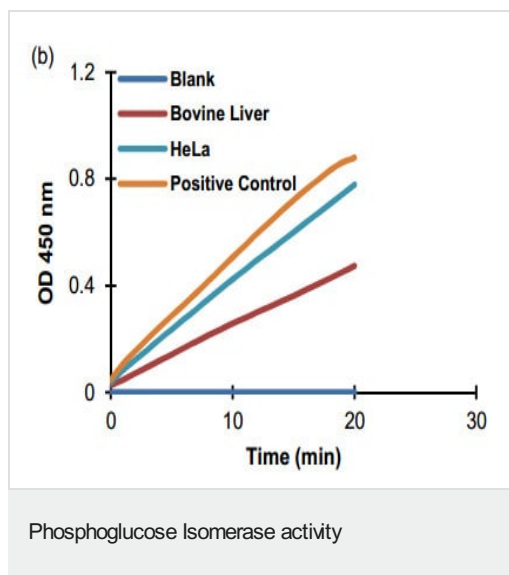
Cellular localization

Cytoplasmic and Secreted

Images



NADH standard curve generated using the method described in the protocol booklet.



Phosphoglucose Isomerase activity in bovine liver, HeLa cell lysate and positive control

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