

# Glucose-6-Phosphate Assay Kit (Colorimetric) ab83426

[17 References](#) [2 Images](#)

### Overview

---

<b>Product name</b>	Glucose-6-Phosphate Assay Kit (Colorimetric)
<b>Detection method</b>	Colorimetric
<b>Sample type</b>	Cell culture supernatant, Urine, Serum, Plasma, Other biological fluids, Tissue Extracts
<b>Assay type</b>	Quantitative
<b>Sensitivity</b>	10 $\mu$ M
<b>Range</b>	1 $\mu$ M - 30 $\mu$ M
<b>Assay time</b>	0h 40m
<b>Product overview</b>	<p>Glucose-6-Phosphate Assay Kit (Colorimetric) (ab83426) is a simple, sensitive and rapid test to quantify glucose-6-phosphate (G6P) in a variety of samples. In the assay, glucose-6-phosphate is oxidized into an intermediate product which in turn converts the probe into an intensely colored product with an absorbance at OD=450 nm. This product can detect G6P in the range of 1-30 nmoles with a detection sensitivity <math>\sim</math>10 <math>\mu</math>M G6P.</p>

For higher sensitivity, we recommend our fluorometric assay [Glucose-6-Phosphate Assay Kit - High Sensitivity \(Fluorometric\) \(ab107923\)](#).

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

**Notes** This product is manufactured by BioVision, an Abcam company and was previously called K657 Glucose-6-Phosphate Colorimetric Assay Kit. K657-100 is the same size as the 100 test size of ab83426.

Glucose-6-phosphate (G6P) is a key sugar intermediate for glucose to get into cells, and then enter either metabolic pathways or storage. G6P can enter the glycolytic pathway, the pentose phosphate shunt or be stored as glycogen or starch. G6P is transformed by G6PDH to generate reducing equivalents in the form of NADPH. This is particularly important in red blood cells where a G6PDH deficiency leads to hemolytic anemia.

**Platform** Microplate reader

### Properties

---

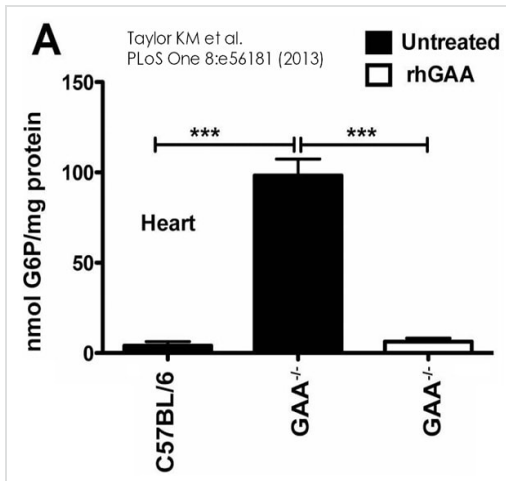
**Storage instructions** Store at -20°C. Please refer to protocols.

Components	100 tests
G6P Assay Buffer	1 x 25ml
G6P Enzyme Mix (Lyophilised)	1 vial
G6P Standard (10 µmol) (Lyophilised)	1 vial
G6P Substrate Mix (Lyophilised)	1 vial

**Relevance**

Glucose 6 phosphate (G6P) is a key sugar intermediate for glucose to get into cells, and then enter either metabolic pathways or storage. G6P can enter the glycolytic pathway, the pentose phosphate shunt or be stored as glycogen or starch. G6P is utilized by its dehydrogenase to generate reducing equivalents in the form of NADPH. This is particularly important in red blood cells where a G6PDH deficiency leads to hemolytic anemia.

**Images**

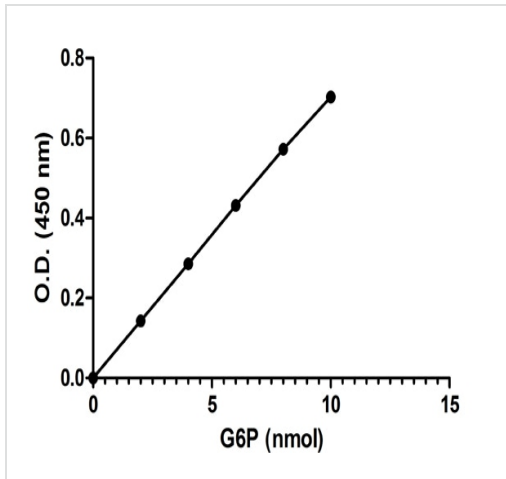


G6P (A) levels are elevated in GAA<sup>-/-</sup> mice compared to wild type (C57/Bl6) and reduced by rhGAA treatment.

GAA<sup>-/-</sup> mice were dosed with rhGAA. G6P was quantified in heart and triceps homogenates from wild type (C57Bl/6) and GAA<sup>-/-</sup> mice using ab83426. Values are means ± SEM. Data was analyzed by one-way ANOVA followed by Newman-Keuls comparing groups. \*\*\*P<0.001.

Functional Studies - Glucose 6 Phosphate Assay  
Kit (ab83426)

Image from Taylor KM et al., PLoS One. 2013;8(2):e56181. Fig 6(A).; doi: 10.1371/journal.pone.0056181. Reproduced under the Creative Commons license <http://creativecommons.org/licenses/by/4.0/>



Colorimetric standard curve: mean of duplicates (+/- SD) with background reads subtracted.

Functional Studies - Glucose 6 Phosphate Assay  
Kit (ab83426)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

### Our Abpromise to you: Quality guaranteed and expert technical support

---

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

### Terms and conditions

---

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors