



Datasheet for ABIN1000265

## Hemoglobin Assay Kit



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1 Image

11 Publications

### Overview

Quantity:	250 tests
Target:	Hemoglobin
Reactivity:	Various Species
Application:	Biochemical Assay (BCA)

### Product Details

Sample Type:	Blood, Serum, Plasma, Urine
Specificity:	0.9 mg/dL
Characteristics:	<p>Sensitive and accurate. Linear detection range 0.9 - 200 mg /dL hemoglobin in 96-well plate assay.</p> <p>Simple and high-throughput. The mix-and-read procedure involves addition of a single working reagent and reading the optical density. Can be readily automated as a high-throughput assay in 96-well plates for thousands of samples per day.</p> <p>Safety. Reagents are non-toxic.</p> <p>Versatility. Assays can be executed in 96-well plate or cuvet.</p>
Components:	Reagent: 50 mL. Calibrator: 10 mL.
Material not included:	Pipetting devices and accessories. Clear-bottom 96-well plates (e.g. Corning Costar) and plate reader. Cuvets and spectrophotometer.

### Target Details

Target: Hemoglobin

Abstract: [Hemoglobin Products](#)

## Target Details

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**Background:** Quantitative determination of hemoglobin by colorimetric (400nm) method.  
Procedure: 5 min.

Hemoglobin (Hb) is made of four globin chains each carrying a heme group. It is carried by red blood cells and transports oxygen from the lungs to the peripheral tissues to maintain the viability of cells. Quantitation of blood hemoglobin has been a key diagnostic parameter for various diseases such as anemia, polycythemia and dehydration. Simple, direct and automation-ready procedures for measuring hemoglobin concentration are becoming popular in Research and Drug Discovery. The hemoglobin assay kit is based on an improved Triton/NaOH method, in which the hemoglobin is converted into a uniform colored end product. The intensity of color, measured at 400 nm, is directly proportional to hemoglobin concentration in the sample. The optimized formulation exhibits high sensitivity and substantially reduces interference by substances in the raw samples.

## Application Details

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**Application Notes:** Direct Assays: total hemoglobin in blood, serum, plasma, urine, etc.  
Pharmacology: effects of drugs on hemoglobin metabolism.  
Drug Discovery: HTS for drugs that modulate hemoglobin levels.

**Protocol:**

Procedure using 96-well plate:

1. Blank and Calibrator. Pipette 50  $\mu$ L water (Blank) and 50  $\mu$ L Calibrator into wells of a clear bottom 96-well plate. Transfer 200  $\mu$ L water into the Blank and Calibrator wells. The diluted calibrator is equivalent to 100 mg/dL hemoglobin.
2. Samples. Serum and plasma samples can be assayed directly ( $n = 1$ ). Blood samples should be diluted 100-fold in distilled water ( $n = 100$ ). Transfer 50  $\mu$ L samples into wells (Important: avoid bubble formation during the pipetting steps). Add 200  $\mu$ L Reagent to sample wells and tap plate lightly to mix.
3. Incubate 5 min at room temperature. Read OD at 390-405nm (peak 400nm).

Procedure using cuvette:

1. Transfer 100  $\mu$ L sample and 1000  $\mu$ L Reagent into a cuvet and tap lightly to mix. Read OD 400 nm against water.
2. Transfer 100  $\mu$ L Calibrator and 1000  $\mu$ L water to cuvet. Read OD at 400nm against water.

**Calculation of Results:** Subtract blank OD (water) from the Calibrator and Sample OD values.  
Conversions: 1mg/dL Hb equals 0.156  $\mu$ M, 0.001% or 10 ppm.

## Application Details

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Restrictions: For Research Use only

## Handling

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Storage: 4 °C

## Publications

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Product cited in: Guo, Li, Ling, Feng, Xia: "Anthocyanin inhibits high glucose-induced hepatic mtGPAT1 activation and prevents fatty acid synthesis through PKC $\zeta$ ." in: **Journal of lipid research**, Vol. 52, Issue 5, pp. 908-22, (2011) ([PubMed](#)).

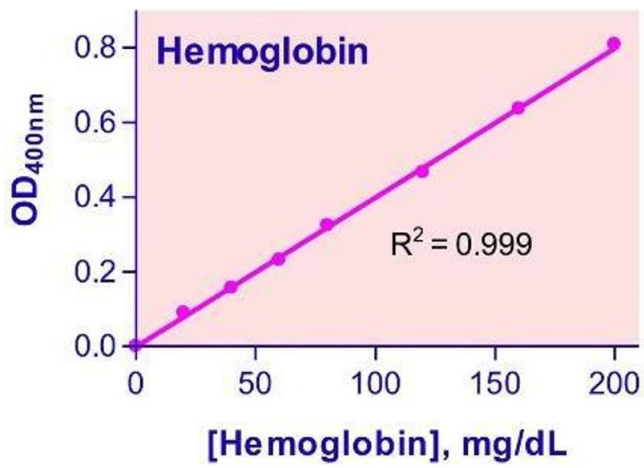
Bytautiene, Tamayo, Kechichian, Drever, Gamble, Hankins, Saade: "Prepregnancy obesity and sFlt1-induced preeclampsia in mice: developmental programming model of metabolic syndrome." in: **American journal of obstetrics and gynecology**, Vol. 204, Issue 5, pp. 398.e1-8, (2011) ([PubMed](#)).

Orban, Palczewska, Palczewski: "Retinyl ester storage particles (retinosomes) from the retinal pigmented epithelium resemble lipid droplets in other tissues." in: **The Journal of biological chemistry**, Vol. 286, Issue 19, pp. 17248-58, (2011) ([PubMed](#)).

Uddin, Duy, Cinar, Tesfaye, Tholen, Juengst, Looft, Schellander: "Detection of quantitative trait loci affecting serum cholesterol, LDL, HDL, and triglyceride in pigs." in: **BMC genetics**, Vol. 12, pp. 62, (2011) ([PubMed](#)).

Oh, Kim, Jang, Byeon, Ryu, Kim, Ha: "Semipurified fractions from the submerged-culture broth of *Agaricus blazei* Murill reduce blood glucose levels in streptozotocin-induced diabetic rats." in: **Journal of agricultural and food chemistry**, Vol. 58, Issue 7, pp. 4113-9, (2010) ([PubMed](#)).

There are more publications referencing this product on: [Product page](#)



Biochemical Assay

Image 1.