Datasheet for ABIN1000265

Hemoglobin Assay Kit

1 Image | 11 Publications

Go to Product page

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:	Sensitive and accurate. Linear detection range 0.9 - 200 mg /dL hemoglobin in 96-well plate assay. 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. Safety. Reagents are non-toxic. Versatility. Assays can be executed in 96-well plate or cuvet.
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

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

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 µL water (Blank) and 50 µL Calibrator into wells of a clear bottom 96-well plate. Transfer 200 µL 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 µL samples into wells (Important: avoid bubble formation during the pipetting steps). Add 200 µL 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 µL sample and 1000 µL Reagent into a cuvet and tap lightly to mix. Read OD 400 nm against water. 2. Transfer 100 µL Calibrator and 1000µL 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 µM, 0.001% or 10 ppm.

Application Details

Restrictions:	For Research Use only

Handling

Storage:	4 °C

Publications

Product cited in:

Singleton, Mambetsariev, Lennon, Mathew, Siegler, Moreno-Vinasco, Salgia, Moss, Garcia: " Methylnaltrexone potentiates the anti-angiogenic effects of mTOR inhibitors." in: **Journal of angiogenesis research**, Vol. 2, Issue 1, pp. 5, (2010) (PubMed).

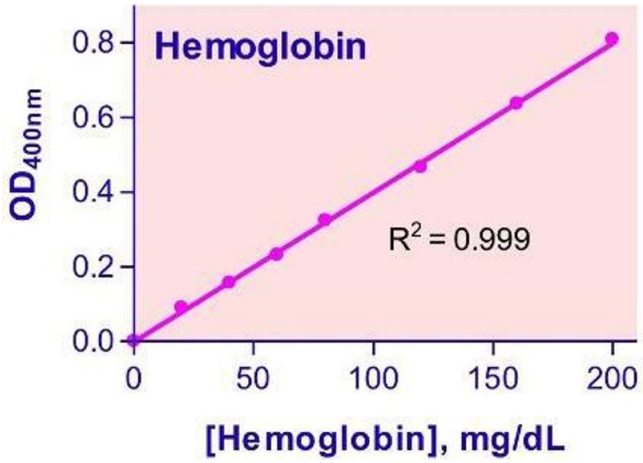
Fridén, Ljungqvist, Middleton, Bredberg, Hammarlund-Udenaes: "Improved measurement of drug exposure in the brain using drug-specific correction for residual blood." in: **Journal of cerebral blood flow and metabolism : official journal of the International Society of Cerebral Blood Flow and Metabolism**, Vol. 30, Issue 1, pp. 150-61, (2010) (PubMed).

Meyer, Heiss, Drexhage, Kehmeier, Balzer, Mühlfeld, Merx, Lauer, Kühl, Floege, Kelm, Rassaf: " Hemodialysis-induced release of hemoglobin limits nitric oxide bioavailability and impairs vascular function." in: **Journal of the American College of Cardiology**, Vol. 55, Issue 5, pp. 454-9, (2010) (PubMed).

French, Zaman, Kelm, Spees, Sobel: "Vascular rhexis: loss of integrity of coronary vasculature in mice subjected to myocardial infarction." in: **Experimental biology and medicine (Maywood, N.J.)**, Vol. 235, Issue 8, pp. 966-73, (2010) (PubMed).

Liu, Ou, Clemenson, Chao, Lutske, Zambetti, Gage, Xu: "Puma is required for p53-induced depletion of adult stem cells." in: **Nature cell biology**, Vol. 12, Issue 10, pp. 993-8, (2010) (PubMed).

There are more publications referencing this product on: Product page



Biochemical Assay

Image 1.

