



Heme Microplate Assay Kit

Catalog # AS0133

Detection and Quantification of Heme Content in Blood, Serum, Plasma, Urine, Other biological fluids Samples.

This instruction must be read in its entirety before using this product.

For research use only, Not for use in diagnostic procedures.

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I. INTRODUCTION.....	2
II. KIT COMPONENTS.....	3
III. MATERIALS REQUIRED BUT NOT PROVIDED.....	3
VI. SAMPLE PREPARATION.....	4
V. ASSAY PROCEDURE.....	5
VI. CALCULATION.....	6
VII. TYPICAL DATA.....	7
VIII. TECHNICAL SUPPORT.....	7
IX. NOTES.....	7

I. INTRODUCTION

Heme is one important member of the porphyrin family. Heme is most commonly recognized as components of hemoglobin, the red pigment in blood, but are also found in a number of other biologically important hemoproteins such as myoglobin, cytochromes, catalases, heme peroxidase, and endothelial nitric oxide synthase. Heme determination is widely practiced by researchers of various blood diseases.

Heme Microplate Assay Kit is based on an improved aqueous alkaline solution method, in which the heme is converted into a uniform colored form. The intensity of color, measured at 505 nm, is directly proportional to the heme concentration in the sample. The optimized formulation substantially reduces interference by substances in the raw samples and exhibits high sensitivity.

II. KIT COMPONENTS

Component	Volume	Storage
96-Well Microplate	1 plate	
Reaction Buffer	15 ml x 1	4 °C
Dye Reagent	Powderx 1	4 °C
Standard	Powderx 1	4 °C
Standard Diluent	5 ml x 1	4 °C
Technical Manual	1 Manual	

Note:

Standard: add 1 ml Standard Diluent to dissolve, then add 20 μ l standard into 980 μ l

Standard Diluent, the concentration will be 100 μ mol/L.

Dye Reagent: add 5 ml distilled water to dissolve before use.

III. MATERIALS REQUIRED BUT NOT PROVIDED

1. Microplate reader to read absorbance at 505 nm
2. Distilled water
3. Pipettor
4. Pipette tips

IV. SAMPLE PREPARATION

1. For blood, serum, plasma, urine and other biological fluid samples

Serum and plasma samples can be assayed directly. Blood samples should be diluted 100-fold in distilled water.

V. ASSAY PROCEDURE

Add following reagents in the microplate:

Reagent	Sample	Standard	Blank
Sample	20 μ l	--	--
Standard	--	20 μ l	--
Distilled water	--	--	20 μ l
Reaction Buffer	130 μ l	130 μ l	130 μ l
Dye Reagent	50 μ l	50 μ l	50 μ l
Mix, incubate at room temperature for 10 minutes, record absorbance measured at 505 nm.			

VI. CALCULATION

1. According to the volume of sample

$$\begin{aligned} \text{Heme } (\mu\text{mol/L}) &= C_{\text{Standard}} \times V_{\text{Standard}} \times (\text{OD}_{\text{Sample}} - \text{OD}_{\text{Blank}}) / (\text{OD}_{\text{Standard}} - \text{OD}_{\text{Blank}}) / V_{\text{Sample}} \\ &= 100 \times (\text{OD}_{\text{Sample}} - \text{OD}_{\text{Blank}}) / (\text{OD}_{\text{Standard}} - \text{OD}_{\text{Blank}}) \end{aligned}$$

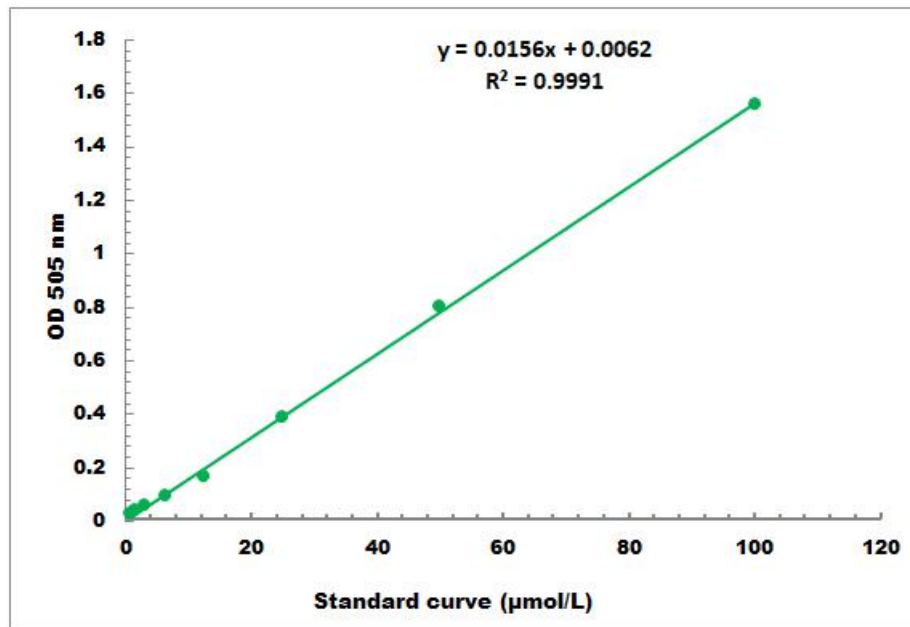
C_{Standard} : the standard concentration, 100 $\mu\text{mol/L}$;

V_{Standard} : the volume of standard, 0.02 ml;

V_{Sample} : the volume of sample, 0.02 ml.

VII. TYPICAL DATA

The standard curve is for demonstration only. A standard curve must be run with each assay.



Detection Range: 1µmol/L - 100 µmol/L

VIII. TECHNICAL SUPPORT

For troubleshooting, information or assistance, please go online to www.sabbiotech.cn or contact us at techcn@signalwayantibody.com

IX. NOTES