Serum Iron Microplate Assay Kit

Catalog # AS0106

Detection and Quantification of Serum Ferrium Content in Serum 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

Iron level in blood is a reliable diagnostic indicator of various disease states. Increased levels of iron concentration in blood are associated with blood loss, increased destruction of red blood cells (e.g. hemorrhage) or decreased blood cell survival, acute hepatitis, certain sideroachrestic anemias, ingestion of iron-rich diets, defects in iron storage (e.g. pernicious anemia). Decreased levels of blood iron may result from insufficient iron ingestion from diets, chronic blood loss pathologies, or increased demand on iron storage as during normal pregnancy.

The ferrium ions can react with Phenanthroline.The productscan be measured at a colorimetric readout at 510 nm.

II.KIT COMPONENTS

Component	Volume	Storage
96-Well Microplate	1 plate	
Assay Buffer	30 ml x 4	4 °C
Reducing Reagent	Powderx 1	4 °C
Reaction Buffer	5 ml x 1	4 °C
Dye Reagent	Powder x 1	4 °C
Standard(1000μmol/L)	1 mlx 1	4 °C
Technical Manual	1 Manual	

Note:

Reducing Reagent: add 5 ml distilled waterto dissolve before use.

Dye Reagent: add 5 ml distilled waterto dissolve before use.

III. MATERIALS REQUIRED BUT NOT PROVIDED

1. Microplate reader to read absorbance at 510 nm
2. Distilled water
3. Pipettor
4. Pipette tips
5. Centrifuge
6. Timer
7. Chloroform

IV. SAMPLE PREPARATION

1.For serum sample

Pipet 1 ml serum into a centrifuge tube, add 1 ml Assay buffer, mix, and incubate for 5 min. Add 1 ml chloroform,vortex for 10-15 sec,then centrifuge for 10 min. Add the supernatant into another centrifuge tube. The supernatant should be water clean; if not, recentrifuged.

V. ASSAY PROCEDURE

Warm all the reagents to room temperature before use.

Add following reagents intothe microplate:

Reagent	Sample	Standard	Blank
Sample	50µl	--	--
Standard	--	50 µl	--
Distilled water	--	--	50 µl
Reducing Reagent	50 µl	50 µl	50 µl
Reaction Buffer	50 µl	50 µl	50 µl
Dye Reagent	50 µl	50 µl	50 µl
Mix, measured at 510 nm and recordthe absorbance.			

VI. CALCULATION

1. According to the serum sample

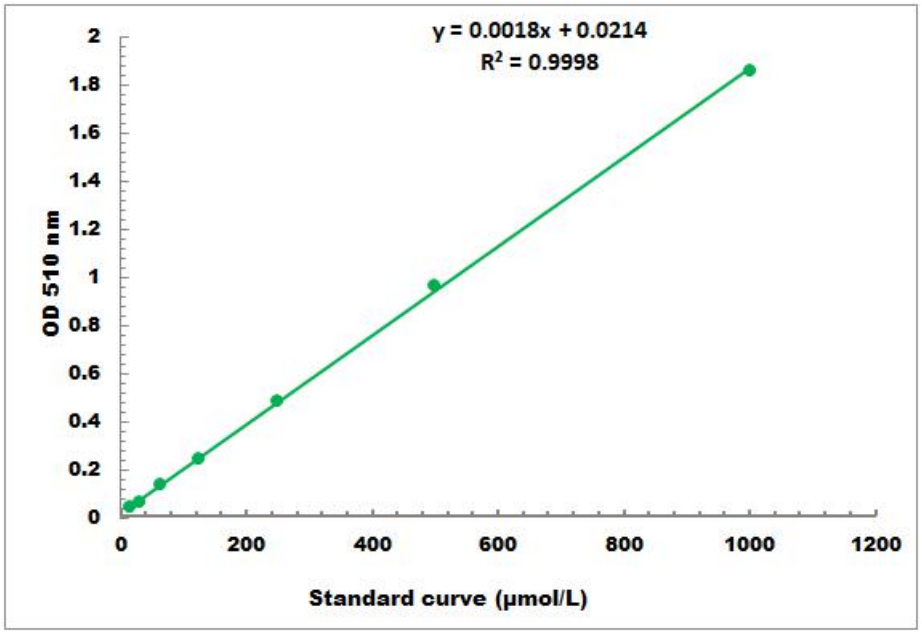
Fe^{3+} (μmol/L) $=C_{Standard} \times (OD_{Sample} - OD_{Blank}) / (OD_{Standard} - OD_{Blank})$

$= 1000 \times (OD_{Sample} - OD_{Blank}) / (OD_{Standard} - OD_{Blank})$

$C_{Standard}$: the concentration of Standard, 1000μmol/L.

VII. TYPICAL DATA

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



Detection Range: 10μmol/L -1000μmol/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