

Iron Assay Kit (Colorimetric) ab83366

★★★★★ [3 Abreviews](#) [234 References](#) [5 图像](#)

概述

产品名称	Iron Assay试剂盒(Colorimetric)
检测方法	Colorimetric
样品类型	Urine, Serum, Other biological fluids
检测类型	Quantitative
灵敏度	> 8 μ M
范围	8 μ M - 400 μ M
检测时间	1h 30m
产品概述	Iron Assay Kit ab83366 provides a simple convenient means of measuring ferrous (Fe ²⁺) and/or ferric (Fe ³⁺) iron in biological samples.

Ferric carrier protein will dissociate ferric into solution in the presence of the acid assay buffer. If the assay buffer has a neutral pH, iron will bind tightly to the iron carrier protein. However, under acidic conditions (pH less than 5.5), iron no longer has a binding affinity for the carrier protein and will be dissociated and released into the solution as iron/ferric ions, whose concentration you can measure using this kit. The Iron Assay Buffer in this kit has an acidic pH that enables this release of iron/ferric ions into the solution.

Free ferrous iron (Fe²⁺) reacts with Iron Probe to produce a stable colored complex with absorbance at 593 nm. Ferric iron (Fe³⁺) can be reduced to form Fe²⁺ enabling the measurement of total iron (Fe²⁺ and Fe³⁺). The level of ferric iron (Fe³⁺) is calculated by subtracting ferrous iron from total iron.

A specific chelate chemical is included in the buffer to block copper ion (Cu²⁺) interference. The kit measures iron in the linear range of 0.4 to 10 nmol or 8 μ M to 200 μ M.

Iron assay protocol summary:

- add samples and standards to wells
- for Fe²⁺ assay add assay buffer only, for total iron (Fe²⁺ and Fe³⁺) add iron reducer
- incubate for 30 min at 37°C
- add Iron Probe and incubate for 60 min at 37°C
- analyze with microplate reader

说明

This product is manufactured by BioVision, an Abcam company and was previously called K390

Iron Colorimetric Assay Kit. K390-100 is the same size as the 100 test size of ab83366.

平台

Microplate reader

性能

存放说明

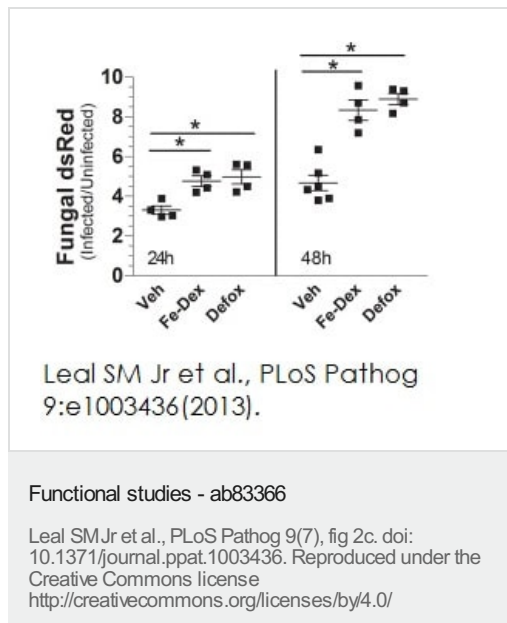
Store at -20°C. Please refer to protocols.

组件	100 tests	2000 tests
Iron Assay Buffer	1 x 25ml	20 x 25ml
Iron Probe	1 x 12ml	20 x 12ml
Iron Reducer	1 x 700µl	20 x 700µl
Iron Standard I	1 x 100µl	20 x 100µl

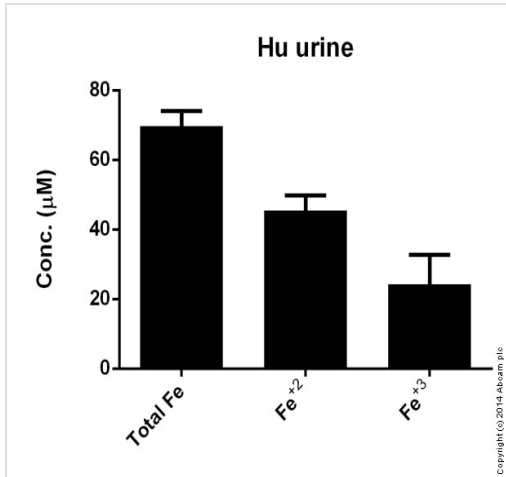
相关性

Iron is essential to nearly all known organisms. It is generally stored in the centre of metalloproteins, in the heme complex, and in oxygen carrier proteins. Inorganic iron also contributes to redox reactions in the iron-sulfur clusters of many enzymes, such as nitrogenase and hydrogenase.

图片

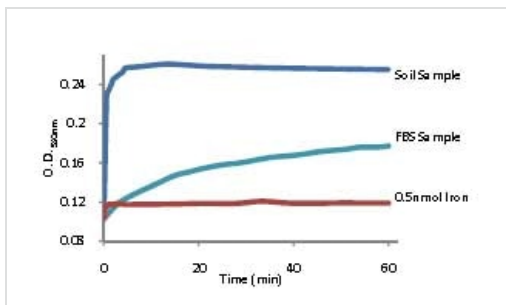


Leal SM Jr et al examined if iron availability regulates fungal growth in an infection as fungal infection initiates an iron sequestration response. Mice given Fe-dextran (Fe-Dex) and deferoxamine (Defox) shows a higher fungal mass (Fungal dsRed) compared to vehicle treated mice over 48 hours. Iron content was quantified in mouse serum using Iron assay kit (ab83366).



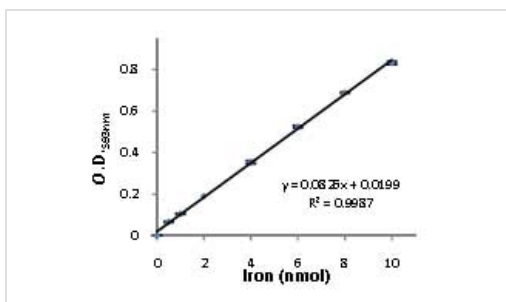
Iron measured in human urine showing concentration (micromolar)

Functional Studies - Iron Assay Kit (ab83366)



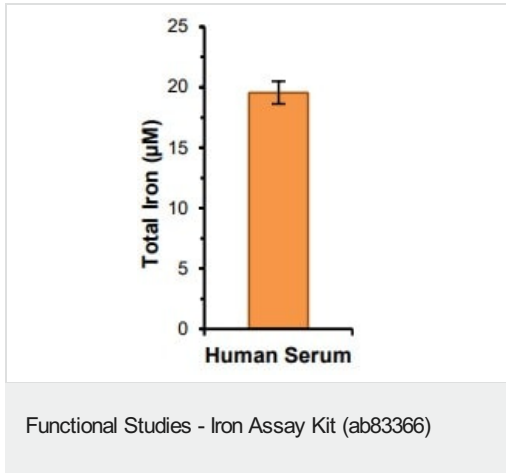
Assay of soluble free iron from a soil sample (5 µL of 100 µL buffer into which 100 mg of soil had been stirred), 5 µL of FBS and 5 µL of a 100 µM sample of iron standard.

Functional Studies - Iron Assay Kit (ab83366)



Example of iron standard curve using ab83366.

Functional Studies - Iron Assay Kit (ab83366)



Assay of total iron(II + III) in off-the-clot human serum (50 µl of serum was added per well). Data are mean ± SEM from 2 independent replicates, performed in duplicate wells.

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