Product Datasheet

Iron Assay Kit ab83366

Overview

Product name: Iron Assay Kit
Sample type: Urine, Serum, Other biological fluids, Tissue Extracts, Cell culture media
Assay type: Quantitative
Sensitivity: > 8 µM
Range: 8 µM - 400 µM
Assay time: 1h 00m

Product overview:
Abcam's Iron Assay Kit provides a simple convenient means of measuring Ferrous and/or Ferric ion in sample. In the assay, ferric carrier protein will dissociate ferric into solution in the presence of acid buffer. After reduction to the ferrous form (Fe2+), iron reacts with Ferene S to produce a stable colored complex and give absorbance at 593 nm. 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 20 nmol in 50 µl sample, or 8 µM to 400 µM iron concentration in various samples. Visit our FAQs page for tips and troubleshooting.

Notes:
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.

Properties

Storage instructions: Store at -20°C. Please refer to protocols.

<table>
<thead>
<tr>
<th>Components</th>
<th>Identifier</th>
<th>100 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron Assay Buffer</td>
<td>WM</td>
<td>1 x 25ml</td>
</tr>
<tr>
<td>Iron Probe</td>
<td>NM</td>
<td>1 x 12ml</td>
</tr>
<tr>
<td>Iron Reducer</td>
<td>Green</td>
<td>1 x 700µl</td>
</tr>
<tr>
<td>Iron Standard (100 mM)</td>
<td>Yellow</td>
<td>1 x 100µl</td>
</tr>
</tbody>
</table>

Relevance:
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.
and hydrogenase.

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 mouse muscle lysate showing quantity (micrograms) per microgram total protein

Iron measured in mouse liver lysate showing quantity (micrograms) per microgram total protein
Iron measured in human urine showing concentration (micromolar)

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.

Example of iron standard curve using ab83366.

Please note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise,
please visit https://www.abcam.com/abpromise or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors