# Calcium Assay kit (Fluorometric) ab112115

## Overview

<table>
<thead>
<tr>
<th>Product name</th>
<th>Calcium Assay kit (Fluorometric)</th>
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<tbody>
<tr>
<td>Detection method</td>
<td>Fluorescent</td>
</tr>
<tr>
<td>Sample type</td>
<td>Serum, Plasma, Cell Lysate</td>
</tr>
<tr>
<td>Assay type</td>
<td>Quantitative</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>0.03 mM</td>
</tr>
<tr>
<td>Range</td>
<td>0.04 mM - 1.5 mM</td>
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<tr>
<td>Assay time</td>
<td>0h 30m</td>
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### Product overview

Calcium Assay Kit (Fluorometric) ab112115 provides a simple method for detecting calcium in physiological solutions by using a red fluorescence probe. The fluorescence signal can be easily read by a fluorescence microplate reader at Ex/Em = 540/590 nm.

The kit can be performed in a convenient 96-well or 384-well microtiter-plate format and easily adapted to automation without a separation step. The calcium assay can be completed within 30 minutes.

The calcium assay kit can be used to detect as little as 0.03 mM calcium. The kit has a broad dynamic range (30 μM to 1 mM).

### Calcium assay protocol summary:
- add samples and standards to wells
- add reaction mix
- incubate for 5-30 min whilst measuring the fluorescence intensity with a microplate reader

### Notes

This product is intended to be used in vitro with solution-based samples such as cell extracts. If you would like to detect calcium in vivo using live cells, please check our Fluo-8, Rhod-4 or Fura-2 based assays.

Previously called Calcium Quantification Kit.

### Platform

Microplate reader

### Storage instructions

Store at -20°C. Please refer to protocols.
Calcium is essential for all living organisms, where Ca\(^{2+}\) sequestration and release into and out of the cytoplasm functions as a signal for many cellular processes. 99% of calcium is found in bones and teeth with the remaining 1% found in the blood and soft tissue. Serum calcium levels are tightly controlled (8.4-11.4 mg/dL) and any variation outside this range can have serious effects. Calcium plays a role in mediating the constriction and relaxation of blood vessels, nerve impulse transmission, muscle contraction, and hormone secretion. Calcium ion channels control the migration of calcium ions across cell membranes, permitting the activation and inhibition of a wide variety of enzymes. Causes of low calcium levels include chronic kidney failure, vitamin D deficiency, and low blood magnesium levels that can occur in severe alcoholism.

### Images

**Ca measured in biologicals showing concentration (mM)**

![Ca measured in biologicals showing concentration (mM)](image1)

**Standard curve (fluorimetric): mean of duplicates (+/-SD) with background readings subtracted**

![Standard curve (fluorimetric): mean of duplicates (+/-SD) with background readings subtracted](image2)
Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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