

### Calcium Assay Kit ab272527

[1 Image](#)

#### Overview

<b>Product name</b>	Calcium Assay Kit
<b>Detection method</b>	Colorimetric
<b>Sample type</b>	Saliva, Urine, Plasma, Other biological fluids, Whole Blood, Food samples
<b>Assay type</b>	Quantitative
<b>Range</b>	20 µM - 5000 µM
<b>Product overview</b>	<p>Calcium Assay Kit (ab272527) is a simple, direct and automation-ready procedures for measuring calcium concentration in biological samples. The kit is designed to measure calcium directly in biological samples without any pretreatment. A phenolsulphonephthalein dye in the kit forms a very stable blue colored complex specifically with free calcium. The intensity of the color, measured at 612 nm, is directly proportional to the calcium concentration in the sample. The optimized formulation minimizes any interference by substances such as magnesium, lipid, protein and bilirubin.</p> <p><b>Sensitive and accurate.</b> Use as little as 5 µL samples. Linear detection range 0.08 mg/dL (20 µM) to 20 mg/dL (5 mM) Ca<sup>2+</sup> in 96-well plate assay.</p> <p><b>Simple and high-throughput.</b> The procedure involves addition of a single working reagent and incubation for 3 min. Can be readily automated as a high-throughput assay for thousands of samples per day.</p> <p><b>Improved reagent stability and versatility.</b> The optimized formulation has greatly enhanced reagent and signal stability. Cuvet or 96-well plate assay.</p> <p><b>Low interference in biological samples.</b> No pretreatments are needed. Assays can be directly performed on raw biological samples i.e., in the presence of lipid, protein and minerals such as magnesium, iron and zinc.</p>
<b>Tested applications</b>	<b>Suitable for:</b> Functional Studies
<b>Platform</b>	Microplate

#### Properties

<b>Storage instructions</b>	Store at +4°C. Please refer to protocols.
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Components	500 tests
Calcium Standard	1 x 1ml
Reagent A	1 x 50ml
Reagent B	1 x 50ml

## Relevance

Calcium is essential for all living organisms, where  $\text{Ca}^{2+}$  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.

## Applications

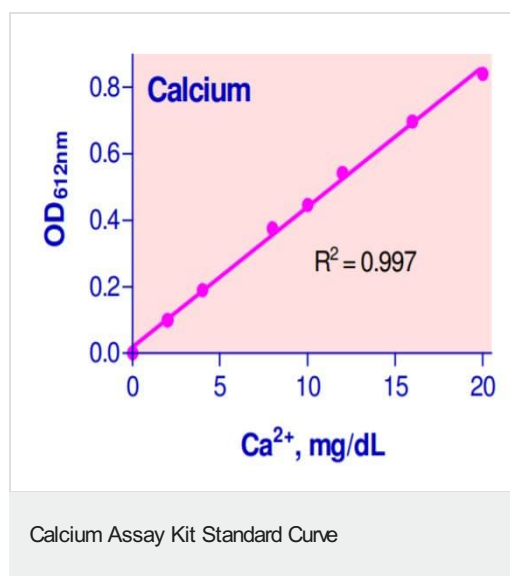
### The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab272527 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Functional Studies		Use at an assay dependent concentration.

## Images



### Typical standard curve – data provided for demonstration

**purposes only.** A new standard curve must be generated for each assay performed.

Example  $\text{Ca}^{2+}$  standard curve.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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- 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

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