

Zinc Quantification Kit (Fluorometric) ab176725

7 References 1 Image

Overview

Product name	Zinc Quantification Kit (Fluorometric)
Detection method	Fluorescent
Sample type	Urine, Serum, Plasma, Cell culture extracts, Other biological fluids, Tissue Extracts
Assay type	Quantitative
Sensitivity	>= 13 ng/ml
Species reactivity	Reacts with: Mammals, Other species
Product overview	Abcam's Zinc Quantification Kit (Fluorometric) (ab176725) provides a robust method for detecting zinc concentration in biological samples using our proprietary Zn Detector, in which Zinc binds to the probe with enhanced fluorescence at Ex/Em= 485/525 nm. The Zinc probe exhibits a large increase in fluorescence in response to Zn ²⁺ (greater than 200~300 folds). It has high Zn ²⁺ - specificity with little responses to other metals, including Ca ²⁺ , Mg ²⁺ , Mn ²⁺ , and Cu ²⁺ . The assay can be used with biological samples such as serum, plasma, and urine with detection sensitivity at 0.2 μM (13 ng/mL).
Notes	Zinc is an essential trace mineral element that plays an important role in a number of biological processes. It is an essential factor required for many enzymes, protein structures, and control of genetic expression. Zinc status also affects basic processes of cell division, growth, differentiation, development, and aging. Clinical signs of zinc deficiency include acrodermatitis, low immunity, diarrhea, poor healing, stunting, hypogonadism, fetal growth failure, teratology and abortion. Simple, direct and automation-ready procedures for measuring zinc ion are highly desirable in research and drug discovery.
Platform	Microplate reader

Properties

Storage instructionsStore at -20°C. Please refer to protocols.

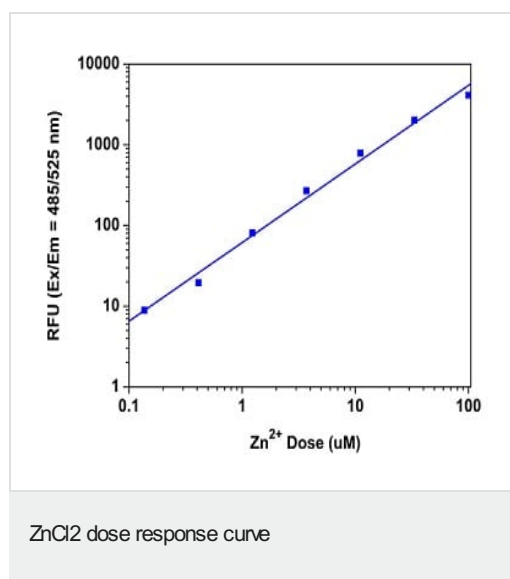
Components	200 tests
Assay Buffer	1 x 15ml
Zn Detector	1 vial

Components	200 tests
ZnCl ₂ Standard	1 vial

Relevance

Zinc, a metallic chemical element, symbol Zn and atomic number 30 is chemically similar to Magnesium due to its similar size and sole oxidation state of +2. Zinc is an essential mineral of great biological significance since many enzymes require it as an essential cofactor. Examples of zinc's biological roles include signal transduction, gene expression, regulation of apoptosis, synaptic plasticity and prostate gland function.

Images



ZnCl₂ dose response was measured on a 96-well black plate with Zinc Quantification Kit (Fluorometric) (ab176725). As low as ~ 0.2 μM Zn²⁺ can be detected with 5 minutes incubation time (n=3).

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