

## Product datasheet

# Cytochrome c Profiling ELISA Kit [ab110172](#)

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### Overview

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<b>Product name</b>	Cytochrome c Profiling ELISA Kit
<b>Detection method</b>	Colorimetric
<b>Sample type</b>	Cell culture extracts, Tissue
<b>Assay type</b>	Sandwich (qualitative)
<b>Assay duration</b>	Multiple steps standard assay
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Cow, Human
<b>Product overview</b>	<p>Abcam's Cytochrome C in vitro ELISA (Enzyme-Linked Immunosorbent Assay) kit is designed for the measurement of Cytochrome C in Human, mouse, rat and bovine samples of purified mitochondria, tissue and cell extracts.</p>

Abcam's Cytochrome C ELISA kit is used to determine the amount of the cytochrome c in a sample. Cytochrome c is immunocaptured within the wells and the amount is determined by adding a cytochrome c specific antibody conjugated with horseradish peroxidase (HRP). This peroxidase changes the substrate from colorless to blue. This reaction takes place in a time dependent manner proportional to the amount of protein captured in the wells. The rate of development of blue color can be followed at 600 nm or the reaction can be stopped, at a user defined time, by the addition of 100 µL of 1.5 N HCl to each well (not supplied) and read at 450 nm.

**Notes**

The permeabilization of the mitochondrial outer membrane and the consequent release of cytochrome c and other apoptogenic proteins from the mitochondrial intermembrane space into cytoplasm is considered hallmark of many apoptotic pathways leading to cell death. Therefore assaying these proteins in mitochondrial and cytoplasmic fractions is a prime interest of many researchers. Most of the current biochemical methods of quantification of cytoplasmic and mitochondrial cytochrome c involve mechanical disruption of cells to obtain mitochondria-enriched and cytosolic fractions. These methods are time-consuming and limited to small number of samples.

This cytochrome c detection assay was developed in conjunction with Abcam's [ab109719](#) Cell Fractionation Kit - Standard and [ab109718](#) Cell Fractionation Kit - HT, and the results were validated with [ab110417](#) ApoTrack™ Cytochrome c Apoptosis Cocktail and with [ab110415](#) ApoTrack™ Apoptosis Detection Kit for Immunocytochemistry.

<b>Tested applications</b>	<b>Suitable for:</b> Sandwich ELISA
<b>Platform</b>	Microplate

## Properties

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**Storage instructions** Store at +4°C. Please refer to protocols.

Components	Identifier	96 tests
10X Blocking Buffer		1 x 15ml
20X Buffer	Tube 1	1 x 15ml
20X Detector antibody	Tube A	1 x 1ml
20X HRP label	Tube B	1 x 1ml
20X Wash Buffer	Tube 3	1 x 15ml
96-well pre-coated microplate		1 unit
Detergent		1 x 1ml
HRP/TMB Development Solution		1 x 20ml

**Relevance** Cytochrome c plays an important role in apoptosis. The protein is located in the space between the inner and outer mitochondrial membranes. An apoptotic stimulus triggers the release of cytochrome c from the mitochondria into cytosol where it binds to Apaf-1. The cytochrome c/Apaf-1 complex activates caspase-9, which then activates caspase-3 and other downstream caspases.

**Cellular localization** Mitochondrial

## Applications

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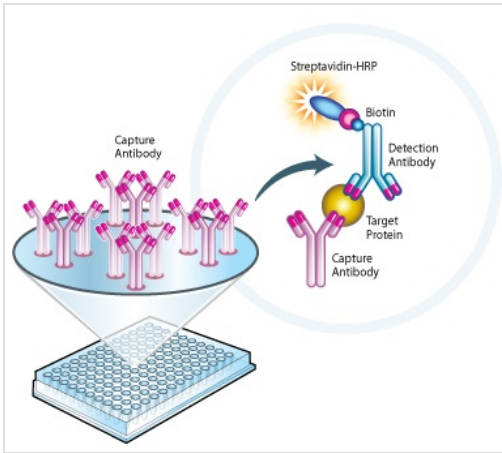
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The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Sandwich ELISA		Use at an assay dependent dilution.

## Images

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Sandwich ELISA - Cytochrome c Protein Quantity  
Microplate Assay Kit (ab110172)

Principle of Sandwich ELISA used in  
Cytochrome c Protein Quantity Microplate  
Assay Kit (ab110172). Substrate plus HRP or  
AP conjugated to streptavidin provide a  
colorimetric signal that is readable by any  
plate readers capable of standard ELISA  
absorbance measurements.

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