CREATIVE BIOMART®
Assay Kit

# Total Antioxidant Capacity Assay Kit

## Product Information

**Cat.No.** Kit-0100

**Product Overview**

Total Antioxidant Capacity Assay Kit is used for measuring the combination of both small molecule antioxidants and proteins and small molecules alone in the presence of our proprietary Protein Mask.

**Description**

Antioxidants play an important role in preventing the formation of and scavenging of free radicals and other potentially toxic oxidizing species. There are three categories of antioxidant species: enzyme systems (GSH reductase, catalase, peroxidase, etc.), small molecules (ascorbate, uric acid, GSH, vitamin E, etc.) and proteins (albumin, transferrin, etc.). Different antioxidants vary in their reducing power. Trolox is used to standardize antioxidants, with all other antioxidants being measured in Trolox equivalents. Measurement of the combined nonenzymatic antioxidant capacity of biological fluids and other samples provides an indication of the overall capability to counteract reactive oxygen species (ROS), resist oxidative damage and combat oxidative stress related diseases. In some cases, the antioxidant contribution of proteins is desired whereas in other cases only the contribution of the small molecule antioxidants is needed. We developed the Total Antioxidant Capacity Assay Kit, which can measure either the combination of both small molecule antioxidants and proteins or small molecules alone in the presence of our proprietary Protein Mask. Cu2+ ion is converted to Cu+ by both small molecule and protein. The Protein Mask prevents Cu2+ reduction by protein, enabling the analysis of only the small molecule antioxidants. The reduced Cu+ ion is chelated with a colorimetric probe giving a broad absorbance peak around 570 nm, proportional to the total antioxidant capacity.

**Target Species**

Mammals

**Usage**

For research use only (RUO)

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**Storage**

Store kit at 4°C.

**Kit Components**

Cu2+ Reagent 0.2 mLAssay Diluent 10 mLProtein Mask 10 mLTrolox Standard (1 μmol) 1 vial

**Detection method** Colorimetric

**Compatible Sample Types**

Biological Fluid, Cell Lysate, Culture Medium, Plasma, Serum, Tissue Lysate, Urine

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