Total Antioxidant Capacity Assay

A plate-based colorimetric assay to measure small molecule antioxidants and proteins, either combined or together.

Antioxidants function to minimize damage to primarily proteins, lipids, and DNA caused by reactive oxygen species (ROS) and/or reactive nitrogen oxide species (RNOS). There are three basic categories of antioxidants: enzymes (GSH reductase, catalase, peroxidase, etc.), other non-enzymatic proteins (albumin, transferrin, etc.) and small molecules (ascorbate, uric acid, GSH, vitamin E, etc.). Trolox is used to standardize antioxidants, with all other antioxidants being measured in Trolox equivalents. Trolox, a water soluble vitamin E analog is used to standardize antioxidants, with all other antioxidants being measured in Trolox equivalents. Measurement of the total antioxidant capacity of biological samples provides an indication of the effectiveness in counteracting reactive oxygen and nitrogen species. It is sometimes necessary to evaluate the contribution of proteins separately from small molecule antioxidants. AkrivisBio's TAC Assay is designed to measure the combination of small molecule antioxidants and proteins, either combined or together. In this TAC Assay, Cu2+ ion is converted to Cu1+ by all available reducing species including small molecules and protein antioxidants. The Protein Mask prevents Cu2+ reduction by proteins thereby enabling the analysis of the contribution of only the small molecule antioxidants. The reduced Cu+ ion then subsequently binds to a chromogenic ligand giving a broad peak with OD at 570 nm, proportional to the total antioxidant capacity.

Ordering Information

Order Online »

AKR-MA-0106	100 wells

Manuals, SDS & CofA

View Online »

Handling & Storage

Long Term Storage	+4°C
Shipping	Blue Ice

Regulatory Status

RUO - Research Use Only

Product Details

Application	Colorimetric detection
Species Reactivity	Species independent
Technical Info / Product Notes	For the Original Manufacturer's data sheet please click here.

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