

OxiSelect Superoxide Dismutase Activity Assay Kit

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CATALOG #
AAA44593

PRODUCT SYNONYMS

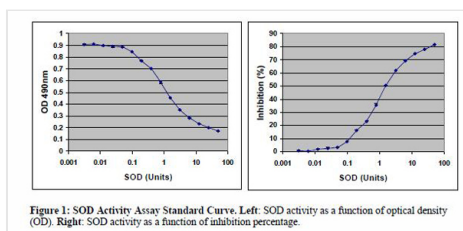
OxiSelect Superoxide Dismutase Activity; OxiSelect Superoxide Dismutase Activity Assay Kit; OxiSelect Superoxide Dismutase Activity assay kit

PRODUCT SPECIFICATIONS

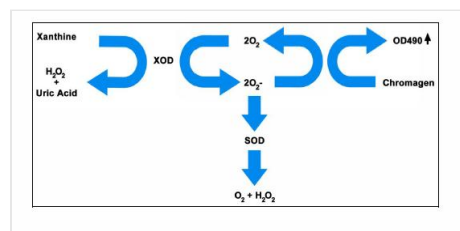
Preparation and Storage

Store kit components at -20 degree C until their expiration dates. Avoid multiple freeze/thaws by aliquoting. Chromagen Solution is light sensitive and should be maintained in amber tubes.

IMAGES



Application Data



Application Data

ADDITIONAL INFORMATION

Related Product Information for OxiSelect Superoxide Dismutase Activity assay kit

Principle of the Assay: Superoxide anions (O_2^-) are generated by a Xanthine/Xanthine Oxidase (XOD) system, and then detected with a Chromagen Solution. However, in the presence of SOD, these superoxide anion concentrations are reduced, yielding less colorimetric signal.

Background/Introduction: Reactive oxygen species (ROS), such as superoxide (O_2^-) and hydrogen peroxide (H_2O_2), are constantly produced during metabolic processes in all living species. Under normal physiological conditions, cellular ROS generation is counterbalanced by the action of antioxidant enzymes and other redox molecules. However, excessive ROS accumulation will lead to cellular injury, such as damage to DNA, protein, and lipid membrane. Because of their potential harmful effects, excessive ROS must be promptly eliminated from the cells by a variety of antioxidant defense mechanisms. Superoxide dismutase (SOD), which catalyzes the dismutation of the superoxide anion into hydrogen peroxide and molecular oxygen, is one of the most important antioxidative enzymes. SOD enzymes are classified into three groups: cytosolic Cu/Zn-SOD, mitochondrial Mn-SOD, and extracellular Ec-SOD. Our OxiSelect™ Superoxide Dismutase Activity Assay uses a xanthine/xanthine oxidase (XOD) system to generate superoxide anions. The included chromagen produces a water-soluble formazan dye upon reduction by superoxide anions. The activity of SOD is determined as the inhibition of chromagen reduction (See Figure 1). The OxiSelect™ Superoxide Dismutase Activity Assay is a fast and reliable kit for the measurement of SOD activity from cell lysate, plasma, serum, tissue homogenates. Each Trial Size Superoxide Dismutase Activity Assay Kit provides sufficient reagents to perform up to 20 assays, including blanks, SOD standards and unknown protein samples.

Product Categories/Family for OxiSelect Superoxide Dismutase Activity assay kit

[Oxidative Stress/Damage](#); [Antioxidant Assays](#); [Antioxidant Enzyme Activity Assays](#); [Superoxide Dismutase \(SOD\) Assay](#)

References

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For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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 Online datasheet: <https://stage.aaabiotech.com/assay-kits/oxiselect-superoxide-dismutase-activity/44593>