

Product datasheet

Superoxide Dismutase Activity Assay Kit (Colorimetric) ab65354

★★★★☆ [2 Abreviews](#) [242 References](#) [4 Images](#)

Overview

Product name	Superoxide Dismutase Activity Assay Kit (Colorimetric)
Detection method	Colorimetric
Sample type	Urine, Serum, Plasma, Other biological fluids, Tissue Extracts, Cell Lysate, Cell culture media
Assay type	Enzyme activity
Assay time	0h 30m
Species reactivity	Reacts with: Mammals, Other species
Product overview	Superoxide Dismutase Activity Assay Kit (Colorimetric) ab65354 is a simple and rapid assay for superoxide dismutase (SOD) activity.

In the SOD assay protocol:

- superoxide anions are produced by the action of xanthine oxidase
- SOD catalyzes the dismutation of the superoxide anion into hydrogen peroxide and O₂
- superoxide anions act on WST-1 to produce a water-soluble formazan dye which can be detected by the increase in absorbance at 450 nm

The greater the activity of SOD in the sample, the less formazan dye is produced.

Superoxide dismutase assay protocol summary:

- add samples to wells
- add WST-1 working solution and enzyme working solution and incubate for 20 min at 37°C
- analyze with microplate reader

Notes This product is manufactured by BioVision, an Abcam company and was previously called K335 Superoxide Dismutase (SOD) Activity Colorimetric Assay Kit. K335-100 is the same size as the 100 test size of ab65354.

Superoxide dismutase (SOD) is one of the most important antioxidative enzymes. It catalyzes the dismutation of the superoxide anion into hydrogen peroxide and molecular oxygen.

Related products

Review the [oxidative stress marker and assay guide](#) to learn about more assays for oxidative stress.

Platform Microplate reader

Properties

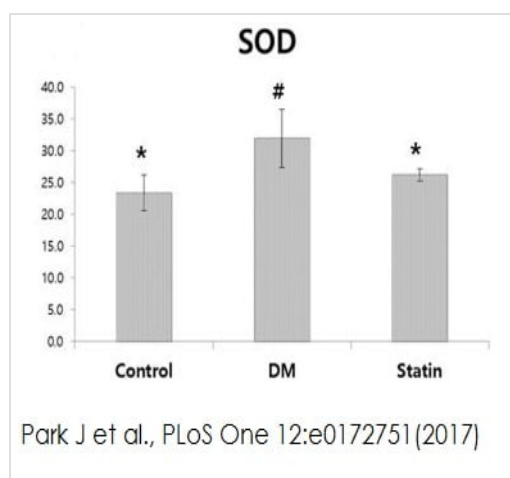
Storage instructions Store at -20°C. Please refer to protocols.

Components	100 tests	2000 tests
SOD Assay Buffer	1 x 20ml	20 x 20ml
SOD Dilution Buffer	1 x 10ml	20 x 10ml
SOD Enzyme Solution	1 vial	20 vials
WST Reagent II	1 x 1ml	20 x 1ml

Relevance Superoxide dismutase (SOD) is an antioxidant enzyme involved in the defense system against reactive oxygen species (ROS). SOD catalyzes the dismutation reaction of superoxide radical anion (O_2^-) to hydrogen peroxide, which is then catalyzed to innocuous O_2 and H_2O by glutathione peroxidase and catalase. Several classes of SOD have been identified. These include intracellular copper, zinc SOD (Cu, Zn SOD/SOD1), mitochondrial manganese SOD (Mn SOD/SOD2) and extracellular Cu, Zn SOD (EC SOD/SOD3).

Cellular localization Cytoplasmic

Images



Park J et al investigates the recovery in erectile function after administration of chronic statin alone in DM (streptozotocin (STZ)-induced diabetes mellitus) rats. SOD activity was determined using Superoxide Dismutase activity assay kit (ab65354).

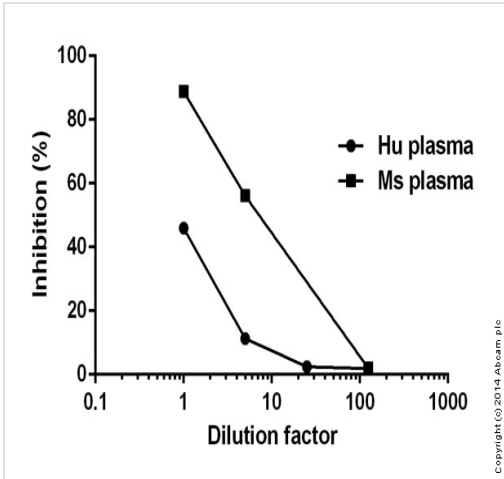
* Indicates statistical significance in comparison with DM group ($P < 0.05$). # Indicates statistical significance in comparison with the statin group ($P < 0.05$).

Park J et al., PLoS One 12:e0172751 (2017)

Functional studies - ab65354

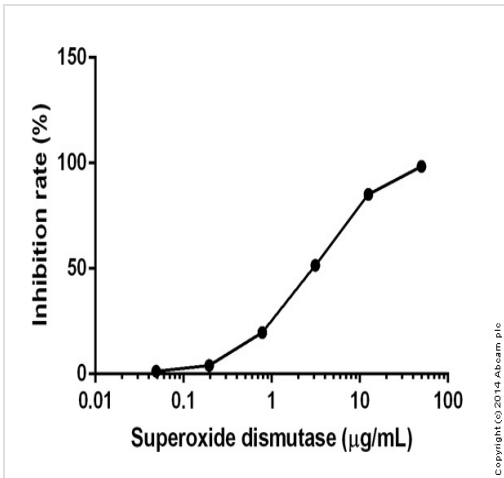
Image from Park J et al., PLoS One 12(2), fig 4b. Doi: 10.1371/journal.pone.0172751 Reproduced under the Creative Commons license <http://creativecommons.org/licenses/by/4.0/>

Superoxide dismutase measured in biofluids at various dilutions



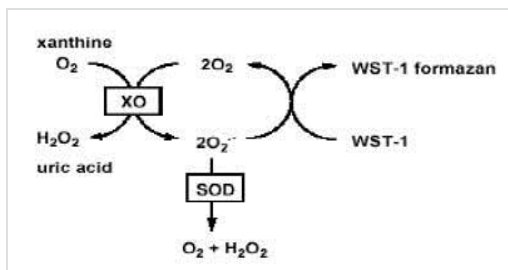
Functional Studies- Superoxide Dismutase Activity
Assay Kit (ab65354)

Superoxidase dismutase ([ab90040](#)) measured showing inhibition rate (%) per concentration (microgram per mL)



Functional Studies - Superoxide Dismutase Activity
Assay Kit (Colorimetric) (ab65354)

Principle of Superoxide Dismutase Assay.



Functional Studies - Superoxide Dismutase Activity
Assay Kit (Colorimetric) (ab65354)

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