

Reactive Oxygen Species (ROS) Detection Assay Kit | ROS assay kit

Reactive Oxygen Species (ROS) Detection Fluorometric Assay Kit

CATALOG #
AAA332522

PRODUCT SYNONYMS

Reactive Oxygen Species (ROS) Detection; Reactive Oxygen Species (ROS) Detection Fluorometric Assay Kit; ROS assay kit

PRODUCT SPECIFICATIONS

Tag	Reactive Oxygen Species, ROS
Features & Benefits	provides a simple, sensitive, rapid ROS detection method. based on the fluorescent probe DCFH-DA. suitable for flow cytometry or fluorescence microscopy. Provides detailed sample preparation and results calculation methods. Reactive Oxygen Species: ROS Detection Assay Kit provides a simple, sensitive, rapid ROS detection method. ROS detection is based on the fluorescent probe DCFH-DA. DCFH-DA is a cell-permeable sensitive probe used to detect intracellular reactive oxygen species: ROS This probe could be hydrolyzed into DCFH by esterase in the cell while passing through the living cell membrane. DCFH is no fluorescence and cannot transmit the cell membrane, which then can be could be oxidated by ROS and produce the fluorescent DCF. Then the fluorescent could be detect by flow cytometry or fluorescence microscopy, and according which the level of cellular reactive oxygen species can be analyzed.
Kit Components	DCFH-DA (10mM)
Usage Notes	Do not mix the components between different batch numbers and manufacturers; otherwise, the results may be abnormal. Avoid bubbles while mixing or redissolving components. Change pipette tips frequently to avoid cross contamination between components. Ensure that all components and equipment are at the proper temperature before starting the experiment. The working concentration of positive control H₂O₂ should be 100 uM (Recommend during 50-200 uM depend on the cell types). The level of Reactive Oxygen Species (ROS) will increase significantly after stimulated 30 min-4 h. The level of Reactive Oxygen Species (ROS) maybe very different for different cells while stimulating with the positive control. The stimulating time and the concentration of positive control could be prolonged or increased, if there is no obvious rise after 30 min. Or shorten the time or reduce the concentration of positive control, while the fluorescent signal is too strong. During the experiment, the fluorescent probe DCFH-DA can be diluted in 1: 2000-1: 5000, and make the final concentration of DCFH-DA to 2-5 uM if the signal of negative control also too strong. The time of probe incubating can be adjusted in 15-60 minutes, and minimize the exposure time while reading the film, and the exposure time of the control group and test groups should to be consistent. Reactive Oxygen Species (ROS) positive control (H₂O₂) is only used as a sample as a positive control, and not all test groups need positive control. Please wash away the unbound probe after incubating the probe, otherwise it will cause a high background. Try to shorten the detection time after incubating the probe (except for stimulation time) to reduce various possible errors.
Preparation and Storage	Please store the whole kit at -20 degree C upon receipt, and protect from light. The kit is valid for 12 months. Please refer to the table below Materials supplied and Storage conditions to store all the components. Shipping Gel pack with blue ice.

ADDITIONAL INFORMATION

Related Product Information for ROS assay kit	Principle of the Assay: Reactive Oxygen Species (ROS) is a natural by-products of oxygen normal metabolism, plays an important role in cell signaling and homeostasis. Under conditions associated with oxidative stress, ROS levels can be significantly increased. The accumulation of ROS could seriously damage the cell structure. Oxidative stress plays an important role in the research of cardiovascular disease, diabetes, osteoporosis, stroke, inflammatory disease, and neurodegenerative diseases and cancer, etc. ROS detection could help determine how oxidative stress adjusts various intracellular pathways. CheKine™ Reactive Oxygen Species (ROS) Detection Fluorometric Assay Kit provides a simple, sensitive, rapid ROS detection method. Its principle is based on the fluorescent probe DCFH-DA. DCFH-DA is a cell-permeable sensitive probe used to detect intracellular reactive oxygen species (ROS). This probe could be hydrolyzed into DCFH by esterase in the cell while passing through the living cell membrane. DCFH has no fluorescence and cannot penetrate the cell membrane, which could be oxidized by intracellular ROS and produce the fluorescent DCF. And then the level of cellular reactive oxygen species can be analyzed via the fluorescent is detected by flow cytometry or fluorescence microscopy.
Product Categories/Family for ROS assay kit	Biochemical Assay Kit; Cell Metabolism; Cytology

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/reactive-oxygen-species-ros-detection/332522>