

Reactive Oxygen Species (ROS) Detection Assay kit

Reactive Oxygen Species (ROS) Assay provides the key reagents necessary for the detection of ROS in live cells. The assay is based on H2DCFDA, a reliable fluorogenic marker for ROS in live cells. We also provide the common inducer of ROS production Reactive oxygen control (Component B, Rosup), as a positive control. Using this combination of dyes according to the optimized protocol provided here, oxidatively stressed and nonstressed cells are reliably distinguished by fluorescence microscopy. Generation of ROS is inevitable for aerobic organisms, and, in healthy cells, occurs at a controlled rate. Under conditions of oxidative stress, ROS production is dramatically increased, resulting in subsequent alteration of membrane lipids, proteins, and nucleic acids. Oxidative damage of these biomolecules is associated with a variety of pathological events including atherosclerosis, carcinogenesis, ischemic reperfusion injury, neurodegenerative disorders and with aging.

The kit contains H2DCFDA, a unique cell-permeable fluorogenic probe, compatible with phenol red, FBS and BSA to detect reactive oxygen species in live cells. Upon the cell entry, H2DCFDA is modified by cellular esterases to form a non-fluorescent H2DCF. Oxidation of H2DCF by intracellular ROS yields highly a fluorescent product that can be detected by FACS, microplate reader, or fluorescence microscope (Ex/Em 495/529nm). The fluorescence intensity is proportional to the ROS levels. Our kit provides a simple and specific assay for the real-time measurement of ROS in living cells. We include sufficient reagents to perform 100 assays and a common ROS inducer as a control for measurement of ROS levels or antioxidant activity with high sensitivity, specificity and accuracy.

Catalog No.	520116
Size	100 Assays
Product Category	Cell Detection
Kit Components	1. DCFH-DA 2. Rosup (50mg/mL) - Active oxygen positive control

Storage/Stability	2 ~ 8°C/1 year
Shipping	Ambient

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