ROS-ID® Total ROS detection kit

Widely cited kit to measure global levels of ROS in live cells

Enzo Life Sciences ROS-ID® Total ROS detection kit includes the Oxidative Stress Detection Reagent (Green, Ex/Em 490/525 nm) to directly monitor real time reactive oxygen and/or nitrogen species (ROS/RNS) production in live cells. This non-fluorescent, cell-permeable detection probe reacts directly with a wide range of reactive species (hydrogen peroxide, peroxynitrite and hydroxyl radicals) yielding a green fluorescent product. Upon staining, the fluorescent product generated can be visualized using a wide-field fluorescence microscope equipped with standard green filter (490/525 nm), or cytometrically using any flow cytometer equipped with a blue (488 nm) laser.

Citations: 102 View Online »

Ordering Information

Order Online »

ENZ-51011	1Kit

Manuals, SDS & CofA

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- Directly monitors global levels of reactive oxygen species (ROS), but not superoxide in live cells
- High sensitivity, specificity and accuracy for live cell studies
- Compatible with major components of tissue culture media (phenol red, FBS and BSA)
- Not designed to detect superoxide, reactive chlorine or bromine species
- Validated on microscopy, flow cytometry, and microplates

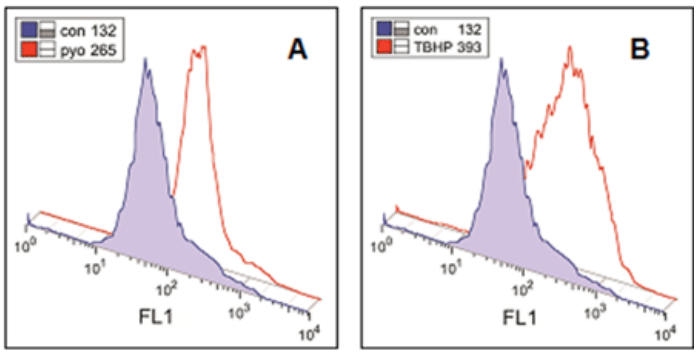

Figure 1. Jurkat cells were induced with 100&microM pyocyanin (general ROS inducer, panel A), or 1 &microM of t-butyl-hydroperoxide (peroxide inducer, panel B), stained with Total ROS Detection Reagent and analyzed using flow cytometry. Untreated cells were used as a control. Cell debris were ungated. The numbers in the inserts reflect the mean green fluorescence of the control and treated cells.

Handling & Storage

Use/Stability	With proper storage, the kit components are stable up to the date noted on the product label. Store kit at -20°C in a non-frost free freezer, or -80°C for longer term storage.
Handling	Protect from light. Avoid freeze/thaw cycles.
Short Term Storage	-20°C
Long Term Storage	-80°C
Shipping	Dry Ice

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	Reactive oxygen species
Application	Flow Cytometry, Fluorescence microscopy, Fluorescent detection, HTS
Application Notes	This kit is designed to directly monitor real time reactive oxygen and/or nitrogen species (ROS/RNS) production in live cells using fluorescence microscopy and/or flow cytometry.
Contents	Oxidative Stress Detection Reagent (Green), 300 nmoles ROS Inducer (Pyocyanin), 1 µmole ROS Inhibitor (N-acetyl-L-cysteine), 2 x 10 mg Wash Buffer Salts, 1 pack
Quality Control	A sample from each lot of ROS-ID® Total ROS detection kit is used to stain HeLa cells using the procedures described in the user manual. The stained cells are analyzed using a wide-field fluorescence microscope equipped with standard green filter (490/525 nm). The following results are obtained: ROS positive control samples induced with Pyocyanin exhibit bright green fluorescence in the cytoplasm. Cells pretreated with the ROS inhibitor don't demonstrate any green fluorescence signal upon induction.
Quantity	200 fluorescence microscopy assays or 50 flow cytometry assays.

Technical Info / Product Notes

The ROS-ID® Total ROS detection kit is a member of the CELLESTIAL® product line, reagents and assay kits comprising fluorescent molecular probes that have been extensively benchmarked for live cell analysis applications. CELLESTIAL® reagents and kits are optimal for use in demanding imaging applications, such as confocal microscopy, flow cytometry and HCS, where consistency and reproducibility are required.

Application Note:

Image-Based Analysis of a Human Neurosphere Stem Cell Model for the Evaluation of Potential Neurotoxicants

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