

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: 104

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Ordering Information

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

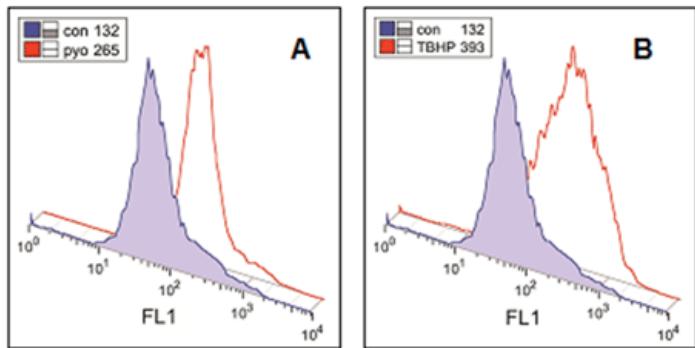


Figure 1. Jurkat cells were induced with 100 μ M pyocyanin (general ROS inducer, panel A), or 1 μ M of t-butyl-hydroperoxide (peroxide inducer, panel B), stained with Total ROS Detection Reagent and analyzed using flow cytometry. Untreated cells were used as a control. Cell debris were ungated. The numbers 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. |

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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ENZO LIFE SCIENCES,
INC.
Phone: 800.942.0430
[info-
usa@enzolifesciences.com](mailto:info-usa@enzolifesciences.com)

European Sales Office
ENZO LIFE SCIENCES
(ELS) AG
Phone: +41 61 926 8989
[info-
eu@enzolifesciences.com](mailto:info-eu@enzolifesciences.com)

Belgium, The Netherlands
& Luxembourg
Phone: +32 3 466 0420
[info-
be@enzolifesciences.com](mailto:info-be@enzolifesciences.com)

France
Phone: +33 472 440 655
[info-
fr@enzolifesciences.com](mailto:info-fr@enzolifesciences.com)

Germany
Phone: +49 7621 5500 526
[info-
de@enzolifesciences.com](mailto:info-de@enzolifesciences.com)

UK & Ireland
Phone (UK customers):
0845 601 1488
Phone: +44 1392 825900
[info-
uk@enzolifesciences.com](mailto:info-uk@enzolifesciences.com)