

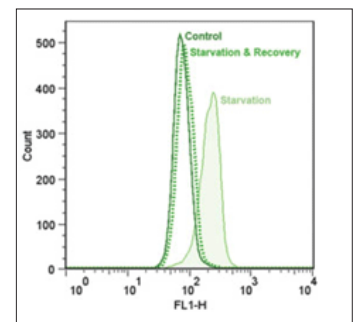
## Cell Viability, Proliferation & Death

Enzo Life Sciences offers a variety of flow cytometry-based assays for cell viability, proliferation and death analysis, available in a wide range of formats to meet individual research needs. These flexible assays are compatible with all flow cytometry platforms, regardless of size or functionality. The assays are easy to perform and can be run quickly using small sample input, without sacrificing sensitivity. This portfolio has been designed to include multiple applications-driven configurations providing information on different parameters of interest.

### Assays Available

- **Cell Senescence Live Cell Analysis Assay (ENZ-KIT130):** A simple assay to quantify senescence-associated  $\beta$ -galactosidase activity in live cells using flow cytometry.
- **CYTO-ID® Autophagy Detection Kit (ENZ-51031):** A no-transfection, quantitative live cell assay that identifies autophagy regulators by imaging and flow cytometry.
- **CYTO-ID® Long-Term Cell Tracer Kits (ENZ-51036/51037):** Non-toxic, fluorescent labeling of live cells that can be used over extended time periods. Available with CYTO-ID® Green Tracer dye or Red Tracer dye.
- **NUCLEAR-ID® Cell Cycle Kits (ENZ-51014/51008):** Simple mix-and-read assay for detection of DNA content in live cells. Available with NUCLEAR-ID® Green Cell Cycle reagent or Red Cell Cycle reagent.
- **NUCLEAR-ID® Chromatin Condensation Assay Kit (ENZ-51021):** A live cell analysis assay for detection of nuclear condensation, one of the prominent hallmarks of apoptosis. Does not require installation of a specialized violet laser.
- **PROTEOSTAT® Aggresome Detection Kit (ENZ-51035):** The only assay that detects aggresomes and aggresome-like inclusion bodies by flow cytometry.

### The CYTO-ID® Autophagy Detection Kit specifically labels autophagic vacuoles without transfection



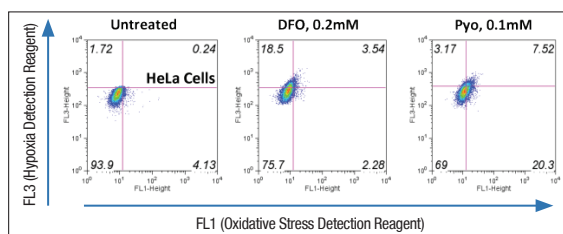
HeLa cells were subjected to starvation and recovery and then labeled with CYTO-ID® Autophagy dye. The dye enables clear detection and quantification of autophagic and pre-autophagic vacuoles.

## Oxidative Stress: Reactive Oxygen Species and Mitochondrial Membrane Potential

Enzo Life Sciences cell-based phenotypic assays directly monitor global levels of reactive oxygen species (ROS) and evaluate the functional status of mitochondrial membrane potential in live cells. These flexible assays are compatible with all flow cytometry platforms regardless of size or functionality. The assays are easy to perform and can be run quickly while providing robust signal and high sensitivity. This portfolio has been optimized to provide maximum information from a single test. Many of the kits are provided in multiplexed configurations.

### Multiplex, Real-time Analysis of Hypoxia and ROS

Detection of hypoxia and oxidative stress levels in cultured human HeLa. Cells were treated with hypoxia inducer (DFO) and ROS inducer (pyocyanin). Numbers in each quadrant reflects the percentage of cells. Results indicate that hypoxia and oxidative stress dye are specific.



ASSAYS AVAILABLE	PRODUCT #
MITO-ID® Membrane Potential Detection Kit	ENZ-51018
ROS-ID® Hypoxia/Oxidative Stress Detection Kit	ENZ-51042
ROS-ID® Superoxide Detection Kit	ENZ-51012
ROS-ID® Total ROS Detection Kit	ENZ-51011
ROS-ID® Total ROS/Superoxide Detection Kit	ENZ-51010

**Global Headquarters**  
**ENZO LIFE SCIENCES, INC.**  
 Ph: 800.942.0430  
 info-usa@enzolifesciences.com

**European Sales Office**  
**ENZO LIFE SCIENCES (ELS) AG**  
 Ph: +41 61 926 8989  
 info-eu@enzolifesciences.com

**Belgium, The Netherlands & Luxembourg**  
**& Luxembourg**  
 Ph: +32 3 466 0420  
 info-be@enzolifesciences.com

**France**  
 Ph: +33 472 440 655  
 info-fr@enzolifesciences.com

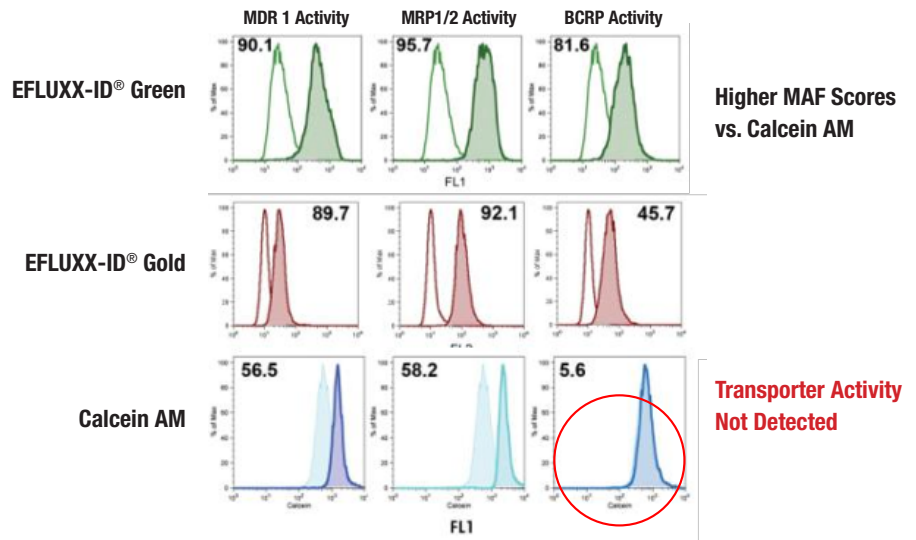
**Germany**  
 Ph: +49 7621 5500 526  
 info-de@enzolifesciences.com

**UK & Ireland**  
 Ph: 0845 601 1488 (UK customers)  
 Ph: +44 1392 825900  
 info-uk@enzolifesciences.com

## Drug Disposition: Multi-Drug Resistance Profiling

### Detect Activity of All Three Major ABC Transporter Proteins

The Enzo Life Sciences multidrug resistance assays are the only available kits for simultaneous monitoring of all three major ABC transporter proteins — MDR, MRP & BCRP. The high sensitivity of the assay delivers fewer false negative results, and provides data for BCRP activity not detected in Calcein AM assays. The kits are easily incorporated into a high content screening environment making them ideal for drug screening applications.



ABC transporter protein activity was evaluated in CHO K1 cells by flow cytometry using EFLUX-ID® Green (top), Gold (middle), or Calcein AM (bottom) dyes. Treatment with specific inhibitors of ABC Transporter proteins (shaded histograms) induces retention of dye within cells relative to untreated cells (lined histograms). The difference in mean fluorescence intensity (MFI) is an indication of the corresponding protein activity, as shown by MAF scores [multidrug resistance activity factors], a quantitative measurement of multidrug resistance. Higher MAF scores are a result of superior specificity of EFLUX-ID® dyes to specific inhibitors. Calcein AM (a common probe for MDR assays), is unable to detect BCRP activity.

ASSAYS AVAILABLE	PRODUCT #
EFLUX-ID® Gold Multidrug Resistance Assay	ENZ-51030
EFLUX-ID® Green Multidrug Resistance Assay	ENZ-51029

## Antibodies for Cellular Analysis

The Enzo Life Sciences portfolio of over 3,000 antibodies for cellular analysis includes more than 630 antibodies specifically validated for use in flow cytometry. These include isotype controls as well as biotin and fluorescent conjugates for use in evaluating intracellular and extracellular proteins, including:

- CD antigens
- Epitope tags
- Heat shock proteins (HSPs)
- Heme oxygenases
- TNF/TRAIL receptors
- Toll-like receptors (TLRs)

## Custom Conjugation Service

Can't find the conjugate you need? Enzo Life Sciences offers custom conjugation services for our antibodies and proteins. Contact our customer service or your local sales representative for more information.

## Worry-free Antibody Trial Program

Finding the right antibody can be difficult and costly. Enzo Life Sciences understands this and is happy to offer a no-risk antibody trial program. Evaluate our antibodies in new applications or species not listed on our data sheet. If the antibody does not give you usable results, we'll simply issue you a credit!

**Global Headquarters**  
**ENZO LIFE SCIENCES, INC.**  
 Ph: 800.942.0430  
 info-usa@enzolifesciences.com

**European Sales Office**  
**ENZO LIFE SCIENCES (ELS) AG**  
 Ph: +41 61 926 8989  
 info-eu@enzolifesciences.com

**Belgium, The Netherlands & Luxembourg**  
 Ph: +32 3 466 0420  
 info-be@enzolifesciences.com

**France**  
 Ph: +33 472 440 655  
 info-fr@enzolifesciences.com

**Germany**  
 Ph: +49 7621 5500 526  
 info-de@enzolifesciences.com

**UK & Ireland**  
 Ph: 0845 601 1488 (UK customers)  
 Ph: +44 1392 825900  
 info-uk@enzolifesciences.com