

Homogenous Cytotoxicity and Cell Proliferation Assay for HTS

- **High sensitivity, as low as 50 cells per well is sufficient**
- **Adaptable for any common cell line and most primary cells**
- **A one step homogenous assay, no centrifugation or washing steps**
- **Formulated for 384-well plates**
- **Fast, requires only few minutes for detection**
- **Easily automated, well suited for HTS**



Thermo LabSystems

CytoPro HTS Kit

This luminometric CytoPro HTS assay uses changes in total ATP amount as a marker for the cytotoxic or cell proliferation effect.

An easy and fast cell line toxicity assay

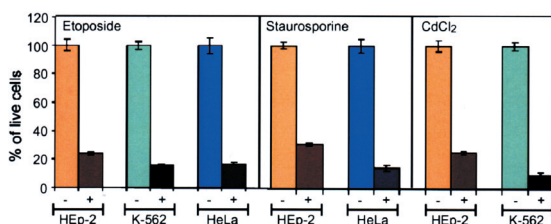
The CytoPro HTS kit is intended for rapid cytotoxicity and cell proliferation assays. The kit is formulated to work for high throughput screening in 384-well microplates and it offers a one step homogeneous assay suitable for mammalian cell lines in culture.

Bioluminescence is now the most widely used method for the assay of ATP due to its very high sensitivity, wide dynamic range, and ease of use. The CytoPro HTS Kit, based on bioluminescence technology, offers many advantages over conventional methods by avoiding the use of radioisotopes, giving greater reproducibility and by being very rapid. The CytoPro HTS Kit can be used for the direct assessment of cell numbers, and substituted for tritiated thymidine uptake or MTT/MTS assays. It may be used to replace conventional endpoint measurements in the determination of either agonist or antagonist activity on specific cell lines, e.g. in cytokine assays.

The CytoPro HTS kit is based on quantitation of ATP, which is present in all metabolically active cells. The emitted light



intensity is linearly dependent on the ATP concentration and is measured using a luminometer. The results interpretation for cytotoxicity or cell proliferation is easy. Cell death has occurred when the sample well contains less ATP than the control well with no test chemical addition. This indicates that the test chemical is cytotoxic. Cell proliferation has occurred when sample well contains more ATP than the control well. This indicates that the test chemical is cell proliferating. The CytoPro HTS kit has been formulated for use with Thermo Labsystems' Luminoskan Ascent microplate luminometer.



Effect of etoposide, staurosporine, and CdCl₂ on different cell lines. Only 1000 cells/well were plated on 384-well plates and then treated with 100 μM etoposide (48 h), 500 nM staurosporine (6 h), or 100 μM CdCl₂ (24 h). All the cytotoxins tested have similar effects on different cell lines.

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Specifications	
Kit contents:	2 SomaLyze Reagents, 2 ATP Monitoring Reagents (AMR) Reagents enough for two sets of 5 complete microplates, max 960/3840 tests
Reconstituted reagent stability:	1 SomaLyze and 1 AMR are combined for the assay; Stability +25°C 8 hours, +4°C 5 days
Kit storage:	-18 °C
Assay conditions:	RT
Nature of the sample:	Suspension or adherent cell lines or primary cells 50 –25 000 cells/well, in culture medium
Sample volume:	25 μl/384 well plates (100 μl/96-well plates)
Total assay time:	Less than 8 min with whole 384-well plate
Additional equipment required:	Luminoskan Ascent luminometer or Fluoroskan Ascent FL combination unit with one dispenser, or other microplate luminometer
Additional reagents/consumables required:	Cell cultures, test chemicals, tissue culture treated white microplates, optional ATP Standard (cat no 6415200)
Ordering information:	
6410 000	CytoPro HTS Kit