

# Cell proliferation & cytotoxicity assay



### Technology

## Orangu<sup>™</sup> is a non-cytotoxic, highly sensitive colorimetric assay for the determination of cell viability in cell proliferation and cytotoxicity assays.

- **Non-cytotoxic:** further experiments can be carried out with the same cells post-measurement
- **Highly sensitive:** absorbance measurement at 450 nm to detect even small cell number differences
- **Easy-to-use:** one simple solution for a less than 15 minutes hands-on protocol

## Assay principle

Orangu™ relies on the activity of multiple intracellular dehydrogenases while other proliferation quantification methods rely only on the activity of the mitochondrial dehydrogenase.

The assay utilizes WST-8, a highly water-soluble tetrazolium salt, which produces an orange coloured formazan dye upon reduction in the presence of an electron mediator.

The amount of the formazan dye generated by dehydrogenases in the cells is directly proportional to the number of viable cells and the length of incubation.

$$\begin{array}{c} & & & & & & & & & \\ & & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & \\ & & & & \\ & & \\ & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ &$$

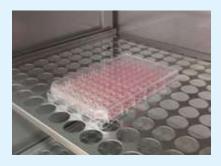
#### Orangu™ is easy-to-use

The Orangu™ assay is supplied as a ready-to-use solution and can be performed in 3 steps:

1 Add neat Orangu™ solution to each well



2 Incubate the plate for 1 to 4 hours in a humidified incubator

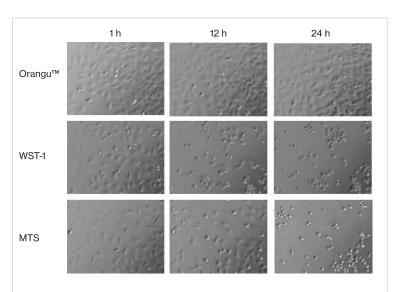


3 Measure the absorbance at 450 nm using a microplate reader



### Why choose Orangu™?

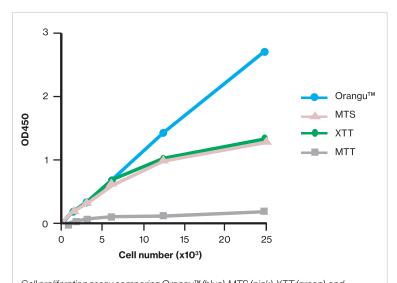
#### Orangu™ is non-cytotoxic



Cell viability study on HeLa cells (5000 cells/well) comparing the toxicity of Orangu™, WST-1 and MTS assays at different time points (1, 12 and 24 hours). Orangu™ is the only non-toxic assay as viable cells are clearly visible up to 24 hours. In contrast, in both the WST-1 and MTS assay, only round non-viable cells are observed at the same time point.

The WST-8 reagent is non-toxic for the cells and allows other measurements or multiple time points to be performed on the same sample making this assay an ideal choice for precious experiments.

#### Orangu™ is highly sensitive



Cell proliferation assay comparing Orangu<sup>TM</sup> (blue), MTS (pink), XTT (green), and MTT (grey). Increasing numbers of HeLa cells were incubated in MEM media containing FCS and the different proliferation reagents for 2 hours. Compared to the other cell counting reagents, Orangu<sup>TM</sup> is linear over a broader range, demonstrating accurate cell quantification.

The Orangu™ assay is more sensitive than other available assays which are widely used, guaranteeing that even small cell number differences are detected.

Cat code	Product name	
OR01-500	Orangu™,5 ml	
OR01-1000	Orangu™,2x5ml	

© 2013-2024 Cell Guidance Systems. All rights reserved. The trademarks mentioned herein are the property of Cell Guidance Systems or their respective owners.

Cell Guidance Systems' reagents and services enable control, manipulation and monitoring of the cell, both *in vitro* and *in vivo* 

#### **Growth Factors**

- Conventional (unformulated)
- PODS® Sustained release

#### **Exosomes**

- Exo-spin™ Purification
- ExoLISA™ ELISA-like detection
- Instant Exosomes<sup>™</sup> purified and characterized
- NTA Service
- Freeze drying service

#### **PeptiGel®**

 Tunable self-assembling peptide hydrogels

#### Other products and services

- Small Molecules
- Softwell™ 2D hydrogel (Europe only)
- Orangu™ Cell counting reagent
- LipoQ™ Lipid quantification assay
- Primary Hepatocytes

#### Cytogenetics

- Karyotype Analysis
- Array Hybridization

Scan for orangu cell counting product page

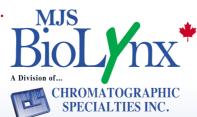




www.cellgs.com



Available in Canada at ...





1-888-593-5969 · biolynx.ca · tech@biolynx.ca