

## TUMOR PROGRESSION ASSAYS

### *Tumor Cell Proliferation*

Cell proliferation is a common event that occurs during the life of an organism and it is counterbalanced with programmed cell death called apoptosis. But the deregulation of one of the processes can provoke an imbalance that result in a loss of homeostasis and finally a disease. The cancer is an uncontrolled cell proliferation and in diseases such as Alzheimer's or different inflammation processes we can appreciate the proliferation of cell types that provoke a tissue remodelling and organ failure. For this reason it is important to evaluate the compounds capability to produce certain cell type proliferation in order to study their tumorigenic and inflammatory potential.

## ENDPOINTS

Several types of assays could be performed to evaluate the cell proliferation depending on the parameters analysed: cell nucleus count, mitochondrial functionality, membrane disruption, enzymes activity, etc.. and it is possible to evaluate also other parameters related with the cells viability, including apoptosis, oxidative stress or nuclear damage.

The most usual ones related to Tumor Cell Proliferation are as follows:

- 🔍 **MTT or WST-8** are colorimetric assays for assessing mitochondrial cell metabolic activity and they are the most usual ones.
- 🔍 **CellTiter-Glo®** Luminescent Cell Viability Assay is a homogeneous method of determining the number of viable cells in culture based on quantitation of the ATP present, an indicator of metabolically active cells.
- 🔍 **LDH Release** is based on the LDH activity measurement in culture supernatant, which is proportional to the number of lysed cells.
- 🔍 **Cell Number quantification.** Quantification of the number of cells using Hoesch dye by image analysis.
- 🔍 **Other parameters**, such as apoptosis, oxidative stress, nuclear damage, etc.. could be also analysed upon request to measure specific pathways associated with cell viability.

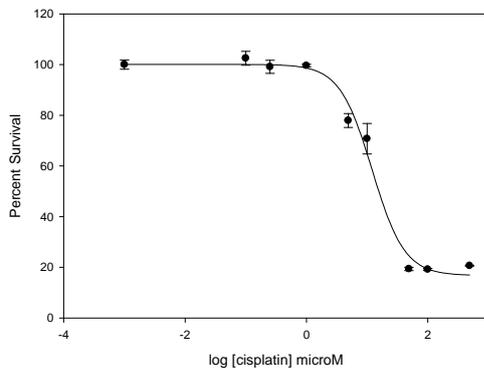
## CELL LINES PANEL

Innoprot offers the following panel of both normal and tumor cell lines for whole cell screening and proliferation assays:

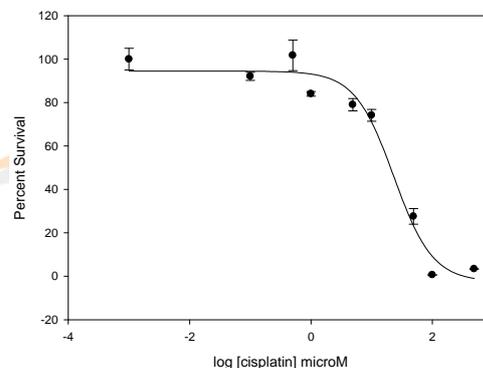
<b>Bladder</b>	J82
<b>Breast</b>	BT474
<b>Breast</b>	MCF-7
<b>Breast</b>	MDA MB 231
<b>Breast</b>	MDA MB 468
<b>Breast</b>	SKBr-3
<b>Breast</b>	T-47D
<b>Burkitt's lymphoma</b>	Raji
<b>Burkitt's lymphoma</b>	Ramos
<b>Cervix</b>	HeLa
<b>Cervix</b>	WKD
<b>CNS</b>	CCF-STTG1
<b>CNS</b>	IMR-32
<b>CNS</b>	SH-SY5Y
<b>CNS</b>	SK-N-DZ
<b>Colon</b>	DLD-1
<b>Colon</b>	HT29
<b>Colon</b>	Ls174
<b>Fibrosarcoma</b>	HT1080
<b>Hepatocarcinoma</b>	Hep-G2
<b>Hepatocarcinoma</b>	SK-HEP-1
<b>histiocytic lymphoma</b>	U-937
<b>Large Cell Lung Cancer</b>	NCI-H460
<b>Leukemia</b>	THP-1
<b>Leukemia</b>	HL-60
<b>Leukemia</b>	Jurkat
<b>Melanoma</b>	A375
<b>Melanoma</b>	CMEL-5
<b>Melanoma</b>	MDA MB 435
<b>Melanoma</b>	COLO-800
<b>Melanoma (Patient Derived)</b>	MN 397

<b>Melanoma (Patient Derived)</b>	MN 526
<b>Melanoma (Patient Derived)</b>	MN 624
<b>Melanoma (Patient Derived)</b>	MN 883
<b>Melanoma (Patient Derived)</b>	MN F69
<b>Melanoma (Patient Derived)</b>	MN J1182
<b>Non-Hongkin's Lymphoma</b>	NK-92
<b>Non-Hongkin's Lymphoma</b>	NK-92MI
<b>Non-Small Cell Lung</b>	A549
<b>Non-Small Cell Lung</b>	Calu-6
<b>Non-Small Cell Lung</b>	NCI-H1299
<b>Non-Small Cell Lung</b>	NCI-H3122
<b>Non-Small Cell Lung</b>	NCI-H2228
<b>Osteosarcoma</b>	U2OS
<b>Ovarian</b>	SK-OV-3
<b>Pancreas</b>	Capan-1
<b>Pancreas</b>	MDA-Panc-28
<b>Pancreas</b>	Panc-1
<b>Prostate</b>	LnCap
<b>Prostate</b>	PC-3
<b>Renal</b>	Caki-1
<b>Small-Cell Lung</b>	NCI H1437
<b>Small-Cell Lung</b>	NCI H1702
<b>Small-Cell Lung</b>	NCI H1793
<b>Small-Cell Lung</b>	NCI H2122
<b>Small-Cell Lung</b>	NCI H23
<b>Small-Cell Lung</b>	NCI H522
<b>Small-Cell Lung</b>	NCI 5935
<b>Small-Cell Lung</b>	NCI H838
<b>Small-Cell Lung</b>	SK-LU-1
<b>T-cell lymphoma</b>	HUT-78
<b>Erythroleukemia</b>	TF-1

## EXAMPLES



**MTT Assay on H1793 Cell Line**  
Dose-response curve & IC<sub>50</sub> calculation



**MTT Assay on A549 Cell Line**  
Dose-response curve & IC<sub>50</sub> calculation