

3D InSight™ Cytotoxicity Assay Kit

Monitor cell viability in 3D microtissues with Promega technology

- Rapid, homogeneous luminescent ATP assay for quantification of metabolically active cells
- Proven lytic capacity compatible with 3D InSight™ microtissues and media including liver microtissues, pancreatic microislets and more
- Provides convenience of ordering 3D microtissues, growth media and assay reagents from a single source

Confidently assess viability in 3D microtissues

The 3D InSight™ Cytotoxicity Assay Kit is a homogeneous biochemical assay for measuring total cellular adenosine-5'-triphosphate (ATP) as an endpoint for cell viability. The assay kit incorporates proprietary luminescent technology from Promega, and is validated for use with InSphero 3D InSight™ microtissues and culture media. The assay is designed for use with multi-well formats, making it ideal for automated high-throughput screening (HTS), cell proliferation and viability assays for assessing toxicity, drug efficacy and more. The proven lytic capacity of the assay reagent allows efficient lysis of small microtissues, making it ideal for use with 3D InSight™ Liver Microtissues and 3D InSight™ Pancreatic Microislets.



The 3D InSight™ Cytotoxicity Assay Kit utilizes proprietary luminescent technology from Promega to quantify cellular ATP levels. The glow-type luminescence generated in the assay is proportional to the amount of ATP present within the microtissue.

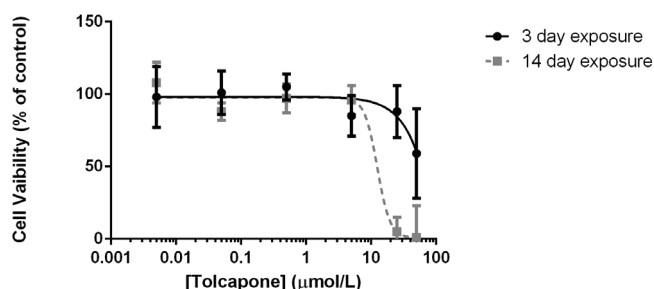
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Promega technology. InSphero expertise. All in one box!



Enable assessment of long-term and chronic toxicity

The 3D InSight™ Cytotoxicity Assay Kit can be used to evaluate compound toxicity in 3D microtissues, such as that seen following treatment of human liver microtissues with the drug Tolcapone. To simulate chronic exposure, 3D InSight™ Human Liver Microtissues received repeat dosing of various Tolcapone concentrations every 48 hours over 14 days, or for just 3 days of transient exposure. Total spheroid ATP levels were determined using the 3D InSight™ Cytotoxicity Assay Kit at day 3 or 14, and normalized to vehicle control treated spheroids. Tolcapone was toxic with an IC_{50} of 12.45 μ M following 14 day exposure, reflecting the chronic toxicity profile observed with the drug *in vivo*.



Assessment of Tolcapone cytotoxicity in human liver microtissues following chronic (14 day) or transient (3 day) exposure using the 3D InSight™ Cytotoxicity Assay Kit.

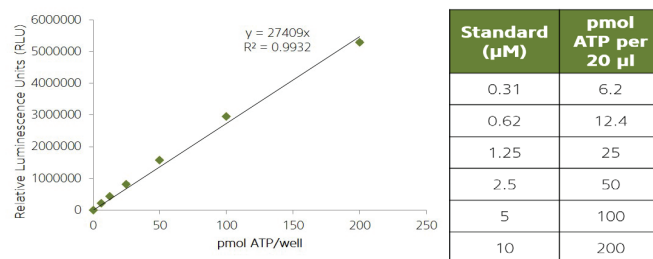
Assaying Toxicity in Tumor Microtissues?

We recommend the use of the Promega CellTiter-Glo® 3D Cell Viability Assay when determining ATP content in larger spheroids (>400 μ m diameter), such as those generated with actively proliferating tumor cell lines. Larger spheroids may exceed the lytic capacity of the assay reagent provided in the 3D InSight™ Cytotoxicity Assay Kit.

Kit details

Each 3D InSight™ Cytotoxicity Assay Kit includes the following components, suitable for quantifying ATP in up to 4 x 96-well plates of microtissues:

- CellTiter-Glo® 2.0 Reagent, 10 ml (stable at 4°C for ~4 weeks)
- 10 μ M Adenosine-5'-triphosphate (ATP) standard, 750 μ l
- Product Manual with optimized protocol for 3D microtissues
- Industry-leading support from our 3D cell culture experts



Example of a typical ATP standard curve.

Ordering information

Catalog #	Description
AK-01-001-01	3D InSight™ Cytotoxicity Assay Kit
MT-02-002-04	3D InSight™ Human Liver Microtissues from primary hepatocytes, co-culture with non-parenchymal cells (96x)
MT-02-001-04	3D InSight™ Rat Liver Microtissues from primary hepatocytes, co-culture with non-parenchymal cells (96x)
MT-04-002-01	3D InSight™ Human Pancreatic Microislets (96x)
CS-07-001-01	3D InSight™ Human Liver Maintenance Medium (500 ml)
CS-07-002-01	3D InSight™ Rat Liver Maintenance Medium (500 ml)
CS-07-005-01	3D InSight™ Human Microislet Maintenance Medium (500 ml)

For pricing and details, visit us at www.insphero.com/assaykits or contact our local branch offices and authorized distributors.

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