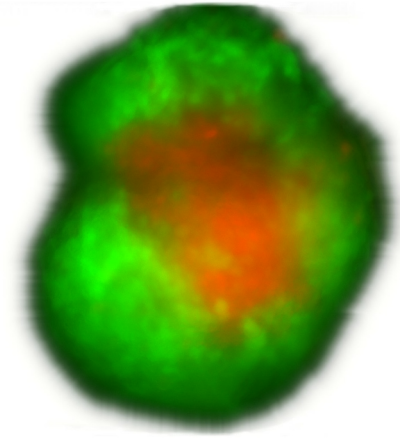


**NEW**



Fluorescent tumor co-culture of HCT116 (green) and NIH3T3 fibroblast cells (red)

# Fluorescent 3D Tumor Microtissues

Now you can easily distinguish cancer and stromal cells in co-culture

- **Direct fluorescence read-out of cytostatic and cytotoxic effects**
- **Fluorescent read-out correlates well with biochemical assays**
- **Co-culture systems mimic mouse xenograft microenvironment better**
- **Differentiate and quantify cancer vs. stromal cells**

## Differential read-out enables the use of co-cultures for drug screening

3D microtissue co-cultures of cancer cell lines and stromal cells are an excellent model to mimic the typical microenvironment of xenografts in vitro. InSphero produces these microtissues using its patent pending process from a large portfolio of tumor cell lines in combination with the NIH3T3 mouse fibroblast cell line.

Now we move this technology a big step forward to remove the need for guesswork in results interpretation. Since the cancer and stromal cells in our fluorescent models express different fluorescent proteins you can, for the first time, easily differentiate and quantify both cell populations.

## Applications

- Compound efficacy studies in oncology
- Early-stage screening with zero step assay
- Drug testing with multiplexed biochemical assays
- Growth kinetics
- ADME/Tox

Read-outs can be taken on standard fluorescent plate readers in InSphero's GravityTRAP™ plates and data correlates well with biochemical assays.

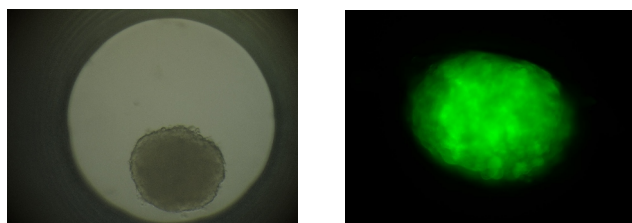
3D fluorescent tumor microtissues: Delivered in GravityTRAP™ plates – ready for you to use!

## 3D Fluorescent Tumor Microtissues

Direct fluorescent quantification of tumor spheroids – ready to use

### Efficient fluorescence-based drug testing with homotypic microtissues

Fluorescent 3D tumor microtissues are available as homotypic cultures with only the tumor cell line present or as co-culture systems with stromal cells. Homotypic cultures are ideal for mid- and high-throughput drug-testing applications, where the direct, zero-step fluorescent read-out offers substantial advantages. IC50 values obtained using the fluorescent read-out are in good agreement with biochemically obtained results.



The fluorescent, homotypic 3D HCT116 microtissues express green fluorescent protein and can be directly imaged in brightfield microscopy (left) or fluorescently quantified in the GravityTRAP plate.

| Compound      | IC50 <sub>LDH</sub> | IC50 <sub>RFU</sub> |
|---------------|---------------------|---------------------|
| Taxol         | 0.30 $\mu$ M        | 0.11 $\mu$ M        |
| Staurosporine | 0.04 $\mu$ M        | 0.03 $\mu$ M        |
| Chlorambucil  | 555.18 $\mu$ M      | 306.00 $\mu$ M      |

Comparison of IC50 values for three compounds obtained using a biochemical LDH assay and direct fluorescent read-out (72h treatment).

### Supplied to you ready-to-use

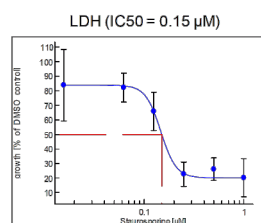
Fluorescent 3D tumor microtissues are supplied ready-to-use in the specially designed GravityTRAP™ plate. In this format automated plate readers can easily locate and analyse microtissues. In addition, the plate is designed to facilitate media changes and compound dosing during long term maintenance.

Fluorescent 3D tumor microtissues are developed in collaboration with Sirion Biotech, Germany

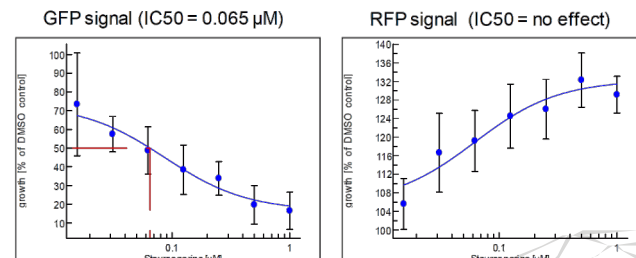


### Advanced compound testing with fluorescent co-cultures

Fluorescent 3D tumor co-culture systems combine GFP-expressing tumor cell lines with stromal cells (NIH3T3) expressing a red fluorescent protein (TurboRFP). This allows precise quantitative information about both cell populations in 3D to be obtained with standard plate readers. Co-cultures have the capability to mimic the typical xenograft microenvironment more closely.



The dose response curve of fluorescent HCT116 co-culture microtissues treated 72h with staurosporine. On the left, the conventional read-out using Promega's CytoToxOne™ LDH assay and below the tumor (GFP) and stromal (RFP) signal recorded with Tecan's Infinite M200 PRO.



### Ordering information

| Catalog #    | Description  |
|--------------|--|
| MT-10-003-01 | HCT116 tumor microtissues with GFP expression (96x)  |
| MT-10-003-03 | HCT116 tumor microtissues with GFP expression co-cultured with RFP-expressing NIH3T3 (96x) |
| CS-07-101    | 3D microtissue maintenance medium, for HCT116 (500 mL)                                     |

### Other cell lines and modifications upon request

For more details, please visit us at [www.insphero.com/tumor](http://www.insphero.com/tumor) or contact one of our customer representatives in the US or Switzerland



QR code

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