SCREEN

Cell³iMager duos

Assessing the growth of 3D spheroids cultured in Matrigel®

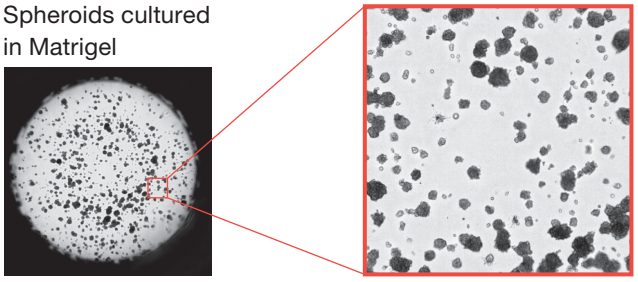
KEYWORD 1) Spheroid 2) 3D culture 3) Gel culture 4) Label free assay

OBJECTIVE Visualisation and Quantification of spheroid volumes cultured in Cell3iMager duos.

Materials and Methods

Cell Line : HepG2 cells (RIKEN BRC)
Medium : DMEM (Nacalai tesque)
Plate : 96-well plate flat bottom (Sumitomo Bakelite)
Seeding cell density : 0 - 5000 cells/well
Culture days : 6 days
Imaging methods: Bright field
Low magnification lens
Multi focus
(0.1 mm pitch, 9 shots)

Spheroids cultured in Matrigel

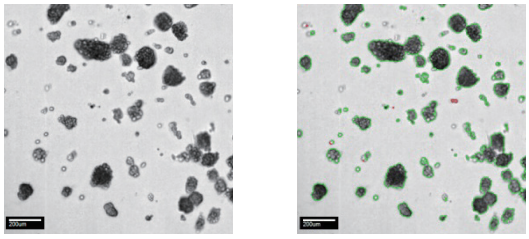


Whole well image

Pixel by pixel image

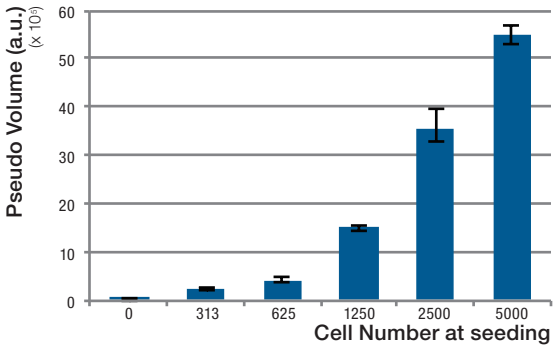
Results and Conclusions

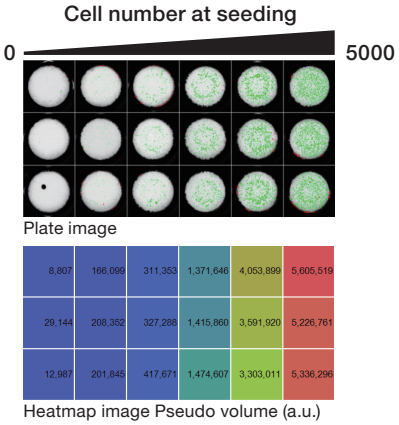
- The increment of volume SUM depends on cell density.
  ('Volume' is calculated as; Optical Density x Area = pseudo volume)
- 3D cultured samples can be quantified by scanning multiple times in z direction, and acquiring the images.
- The quantification of spheroids by Cell3iMager duos can be performed on various culture methods such as 'in Matrigel' and 'on Matrigel' scaffolds.



without object detection

with object detection





SCREEN Holdings Co., Ltd.

KYOTO (Head office) / Tenjinkita-machi 1-1, Teranouchi-agaru 4-chome, Horikawa-dori, Kamigyo-ku, Kyoto 602-8585, Japan

Life Science Business Development and Sales Division

KYOTO (Rakusai)
Furukawa-cho 322, Hazukashi, Fushimiku, Kyoto 612-8486, Japan
Tel: +81-75-931-7824 / Fax: +81-75-931-7826

TOKYO
7th Floor, Yamatane Bldg., 2-21 Etchujima 1-chome, Koto-ku, Tokyo 135-0044, Japan
Tel: +81-3-4334-7977 / Fax: +81-3-4334-7978

Email: screen_lifescience@screen.co.jp

www.screen-cell3imager.com