CREATIVE BIOMART®
Assay Kit

3D Cell Culture HTS Cell Viability Complete Assay Kit

Product Information

Cat

Kit-2291

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Product Overview

Three dimensional (3D) cell cultures are artificially-created environments in which cells are permitted to grow or interact with their surroundings in a 3D fashion. 3D cell cultures improve the function, differentiation and viability of cells and recapitulate in vivo microenvironment compared to conventional 2D cell cultures. 3D matrices provide a physiologically relevant screening platform, by mimicking the in vivo responses, for many cell types including cancer and stem cells in developmental morphogenesis, pharmacology, drug metabolism and drug toxicity studies. Quantification of number of viable cells is an indispensable tool in in vitro screening in these studies. Calcein AM is a non-fluorescent, hydrophobic compound that easily penetrates intact and live cells, and has been widely used to assess cell viability and proliferation in Cell Biology research.However, with the use of 3D matrices, some proteases-based dissociation methods don't completely dissolve the matrices and cell aggregates, which could alter the result in quantitative in vitro assays such as viability assessment. 3D Cell Culture Cell Viability Complete Assay Kit provides a standardized fluorometric method for sensitive quantification of viable cells that can detect as low as 50 viable cells in each well and can be measured at Ex/Em = 485/530 nm. The measured fluorescence intensity is proportional to the number of viable cells. Further, as a complete set, the kit comes with an optimized and gentle non-enzymatic dissociation solution for the recovery of viable and dead cells from spheroids in matrices and scaffolds. This assay kit provides an easy-to-use, non-radioactive, and high-throughput method for characterizing and screening cell viability, cytotoxicity and apoptosis.

Applications

Matrix and spheroid dissociations from 3D cell culture for cell growth assessment;
Measurement of cell viability in response to growth factors, cytokines, mitogens and nutrients;
Analysis of cytotoxic/cytostatic compounds that affect cell growth and spheroid formation, such as

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anticancer drugs, toxic agents and other pharmaceuticals.

Storage

-20°C

Shipping

Gel Pack

Size

100 assays

Kit Components

Matrix Dissociation Saline Solution; Viability Assay Buffer; Calcein AM

Target Species

Mammalian

Detection method Fluorescence (Ex/Em = 485/530 nm)

Features & Benefits

Convenient & non-radioactive;
High-throughput;
Highly-sensitive: detect as low as 50 viable cells in less than 30 min.
Suitable for cell proliferation, cell viability, chemotaxis, cytotoxicity and apoptosis

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