

Certificate of Analysis

Product: QBlue Cell Viability Assay Kits

Catalog No.: Z5030004 and Z5030005

Shipping Condition: Room Temperature

Storage Condition: 4°C

Shelf Life: One year from the date of receipt under proper storage conditions

Description

This homogeneous assay involves simply adding a single reagent, the QBlue reagent, to the cell culture and measuring the fluorescence intensity (excitation wavelength = 530 - 570 nm, emission wavelength = 590 - 620 nm) after an incubation step. The CellQuanti-Blue™ reagent, like other resazurin-based assays such as the Alamar Blue reagent, utilizes the redox dye resazurin, which is not fluorescent, but upon reduction by metabolically active cells is converted into a highly fluorescent product (resorufin). Living cells can readily reduce this non-toxic reagent and the resulting increase in fluorescence intensity can be conveniently monitored using a fluorescence spectrophotometer or plate reader. Nonviable cells have no metabolic capacity and, thus, will not reduce the dye. Therefore, the fluorescence intensity observed in this assay is a true measure of the viable cells.

The Qblue reagent has been optimized for maximum sensitivity, reproducibility and long shelf life. The homogeneous cell-based assay can be performed in multi-well plates. The reagent is compatible with all culture media and with all liquid handling systems for high-throughput screening applications in 96-well and 384-well plates. Applications include cell proliferation, cytotoxicity and apoptosis.

Data Analysis

For cell proliferation or cytotoxicity assays, the activity of a test compound can be calculated as percent change in cell number as follows,

$$\text{Activity (\%)} \text{ or Cell viability (\%)} = 100 \times (F_{\text{cmpd}} - F_o) / (F_{\text{ctrl}} - F_o)$$

where F_{cmpd} and F_{ctrl} are the average fluorescence intensities in the presence and absence (vehicle control) of the test compound and F_o the averaged blank control fluorescence intensity.

For dose-response studies, the data are plotted against compound concentration and the EC_{50} for proliferation assay and IC_{50} for cytotoxicity assay can be determined by non-linear regression analysis using Prism or other data analysis tools.

Components

1. One Kit
2. User Manual
3. Certificate of Analysis
4. MSDS

FOR RESEARCH USE ONLY

APPROVED BY: