➢ The 2D proliferation assay via CellTiter-Glo™ detection

Reaction Biology offers a handful of different readout options for determination of cell proliferation and viability. The CellTitre-Glo™ detection format allows testing of large numbers of compounds in a rapid cost-efficient fashion. After three days of compound incubation, CellTiter-Glo™ Luminescence Cell Viability reagent (Promega) is added to the cell suspension for determining the amount of viable cells based on quantitation of the ATP present, an indicator of metabolically active cells.

Advantages: CellTitre-Glo™ is our workhorse readout for several reasons: It is designed for use in multiwell plates making it the ideal choice for high-throughput screening, the reagent can be pipetted directly into the serum-containing cell media, thus cell washing, removal of medium and multiple pipetting steps are not required. The readout time is only a few minutes and reproducibility is outstanding.

➢ Assay Procedure

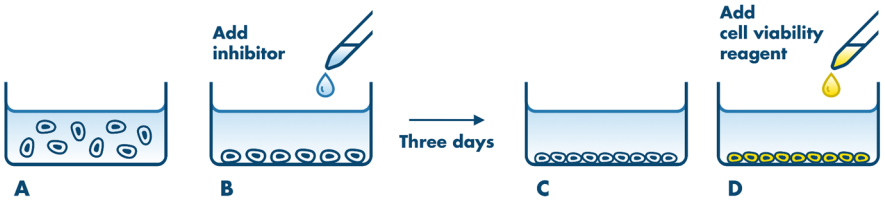

Figure 1: Assay procedure.
Cells are seeded into multi-well plates at cell specific concentration (A). The next day, when adherent cells have attached (B), compounds are added and cells are incubated for 72 h. Subsequently, the cell viability dye CellTiter-Glo™ is added and luminescence is measured as parameter for cell viability (C+D).

➢ Study Example

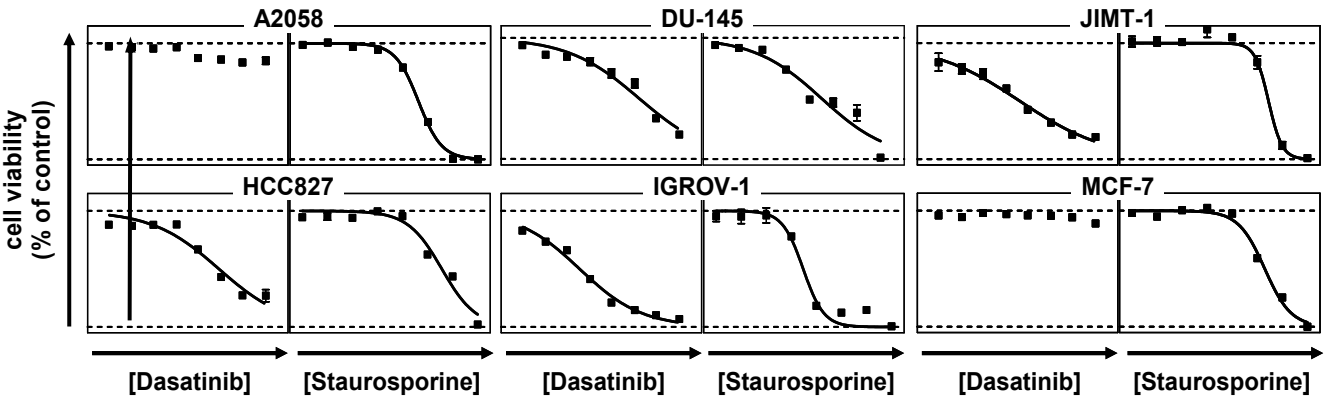

Figure 2: Study example.
Kinase inhibitors Dasatinib and Staurosporine were tested for inhibition of the proliferation of 6 cancer cell lines. 72 h after compound addition, cells were stained with a cell viability dye. Signals were quantified and, for analysis of IC50 values, were expressed as percentage of proliferation in the presence of solvent alone (100 % = high control) as compared to cells treated with 1E-5M Staurosporine (0 % = low control).