WST-1 Cell Proliferation and Cytotoxicity Assay Kit

Catalog No.: AR1159

Size: 500 tests

Introduction

1. WST-1 Cell Proliferation and Cytotoxicity Assay Kit is a sensitive and accurate assay for cell cytotoxicity and proliferation.

2. WST-1 assay is much like MTT assay and the MTS assay, they are colorimetric assays for measuring the activity of enzymes that reduce MTT or close dyes (XTT, MTS, WSTs) to formazan dyes, giving a purple yellow. A main application allows assessing the viability (cell counting) and the proliferation of cells (cell culture assays). It can also be used to determine cytotoxicity of potential medicinal agents and toxic materials, since those agents would stimulate or inhibit cell viability and growth.

3. This kit is very convenience to use. It is unnecessary to use isotope, to wash and collect cells, as well as to solute formazan. The entire step can be done in only one 96-well plate.

4. WST-1 is not toxic to cells. After adds WST-1, it can be read by coated wells repeatedly in different time. In this way, the detect time will be more flexible to find the best detect time.

Kit Component

WST-1 (powder) 1 tube
Electron coupling reagent 5 ml

Storage

At -20°C in dark for one year. After reconstituting, WST-1 solution can be stored at 4°C in dark for one week, at -20°C in dark for half a year (avoid repeatedly freezing and thawing).
Protocol
1. WST-1 reagent preparation: add 5ml Electron coupling reagent into WST-1 powder and mix thoroughly. Incubate the solution for 2-10 min at 37˚C to dissolve sediments completely before use.

2. Collect cells on logarithmic phase. Count the cells and adjust the concentration of the cell suspension. Add 100 μl of a cell suspension (1000-10000 cells/well) to each well in a 96 well microplate. (Add sterile PBS buffer to marginal wells).

3. Incubate in a CO₂ incubator at 37˚C until monolayer cells cover well bottoms (cells number of each well depends on cell size and proliferation speed). Add 0-10 μl drugs with concentration gradient in wells after cells adhere, usually two hours or half a day, including 5 duplicate wells.

4. Add 10 μl WST-1 Reagent to each well, continue to incubate for 4 hours. If drug reacts with WST-1, centrifuge and then remove culture medium. Wash with PBS buffer 2-3 times; add culture medium with WST-1.

5. Optimal incubation time will depend on the individual cell type and concentration. For the first experiment, read results after 0.5 hour, 1hour, 2 hours and 4 hours incubation respectively, then chose an optimum incubation time for next step.

6. Shake plate for 1 minute on a shaker to mix contents.

7. Measure the absorbance at 450 nm with a microplate reader. Using dual wavelength spectrophotometry, you may choose wavelength longer than 600 nm.