Rev. 1

WST-1 Cell Viability & Proliferation Assay (WST)

Catalog #8038

1000 Tests in 96-well plate

Product Description

The reduction of tetrazolim salts to colored formazan compounds by succinate-tetrazolim reductase provides a sensitive and accurate method to measure cell viability and proliferation. The cleavage of the tetrazolim salts to formazan takes place in the mitochondria of metabolically active cells. ScienCell's WST-1 Cell Viability & Proliferation Assay utilizes a tetrazolim salt, WST-1[2-(4-Iodophenyl)-3-(4-nitrophenyl)-5-(2,4-disulfophenyl)-2H-tetrazolium]. WST-1 produces a highly water soluble formazan upon metabolically active cells, allowing a direct and user-friendly colorimetric measurement of cell viability and proliferation without an additional extraction step. The WST kit provides the user the flexibility to record absorbance at different time points, if desired.

Kit Components

Cat. #	# of vials	Reagent	Quantity	Storage
8038a	5	WST-1 powder	6.5 mg	-20°C, Dark
8038b	5	Electro Coupling Reagent	2 ml	-80°C

Quality Control

Human primary cells are serial diluted and plated in a 96-well plate. The WST-1 Cell Viability & Proliferation Assay kit is used and a linear relationship can be observed between signal produced (OD_{450nm}- OD_{630nm}) and the number of cells (Figure 1).

Product Use

WST kit is used to evaluate the cell viability and proliferation *in vitro*. It is not approved for human or animal use, or application in clinical or *in vitro* diagnostic procedures.

Shipping

All components are shipped on dry ice.

Storage

Upon receipt, store WST-1 powder (Cat. #8038a) at -20°C in the dark and Electro Coupling Reagent (Cat. #8038b) at -80°C.

Procedure (96-well plate)

1. Plate and culture cells in a clear-bottom 96-well tissue culture plate. Incubate cells with test compounds and controls for the desired period of time. The final volume of culture medium in each well should be 100 µl.
2. Thaw the Electro Coupling Reagent (Cat. #8038b), and reconstitute each vial of WST-1 (Cat #8038a) with 2 ml of Electro Coupling Reagent. Vortex briefly and use promptly. Freshly reconstituted WST-1 is recommended for each experiment. Keep the working reagent in the

dark.

3. Add 10 µl of reconstituted WST-1 working reagent to each well of 96-well plate (the volume of the WST-1 reagent should be 1/10 of the original culture medium). Mix well by gently rocking the plate side-to-side.
4. Incubate cultures with WST-1 at 37°C for 2-4 hours depending on the cell type and seeding density.
5. After incubation, measure the absorbance on an ELISA plate reader with a test wavelength at 450 nm and a reference wavelength at 630 nm, and subtract the 630 nm background absorbance from the 450 nm measurement.

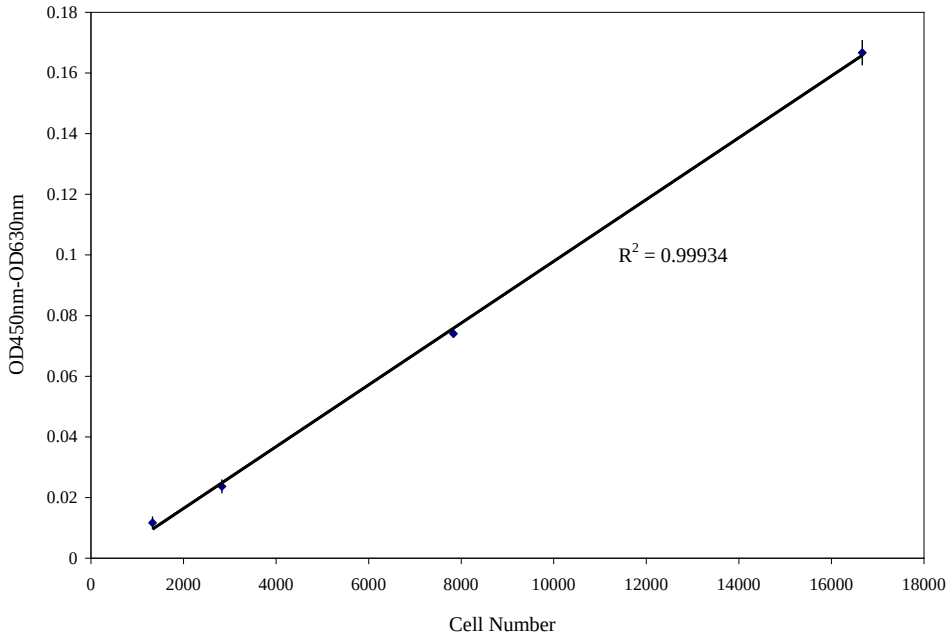

Figure 1. A linear relationship can be observed between OD_{450nm}-OD_{630nm} and the number of Human Astrocytes (Cat. #1800).