



Ready-to-use Cell Proliferation Colorimetric Reagent, WST-1 rev

(Catalog #K304-2500; 2500 assays; Store at -20°C)

I. Introduction:

The ready-to-use cell proliferation reagent, WST-1 provides a simple and accurate method to measure cell proliferation, which is based on the cleavage of the tetrazolium salt WST-1 to formazan by cellular mitochondrial dehydrogenases. Expansion in the number of viable cells results in an increase in the activity of the mitochondrial dehydrogenases, which in turn leads to increase in the amount of formazan dye formed. The formazan dye produced by viable cells can be quantified by measuring the absorbance at 440 nm. This new method is non-radioactive, rapid and more sensitive than MTT, XTT, or MTS-based assays. The entire assay can be performed in the same microtiter plate and does not require extra steps like washing, harvesting and cell solubilization.

II. Application:

- . Measurement of cell proliferation in response to growth factors, cytokines, mitogens, and nutrients, etc.
- Analysis of cytotoxic and cytostatic compounds such as anticancer drugs, toxic agents and other pharmaceuticals.
- Assessment of physiological mediators and antibodies that inhibit cell growth.

III. Sample Type:

Adherent or suspension cells cultured in 96-well microtiter plate.

IV. Kit Contents:

Components	2500 assays	Part Number
WST-1 Reagent (in electron coupling solution)	25 ml	K304-2500

V. User Supplied Reagents and Equipments:

- 96-well clear plate with flat bottom
- Multi-well spectrophotometer (ELISA reader)

VI. Storage and Handling:

Aliquot the WST-1 Reagent and store at -20°C. The WST-1 Reagent is stable for a few weeks at 4°C, and 6 months at -20°C. It is recommended to prepare aliquots of the solution (1 ml is sufficient for assay with one 96-well microtiter plate), to avoid freeze/thaw.

VII. Cell Proliferation Assay Procedure:

- 1. Culture cells (0.1 5 x 10⁴/well) in a 96-well microtiter plate in a final volume of 100 μl/well culture medium in the absence or presence of various amounts of the factors tested. (**Note:** For toxicity assays, use more cells to start with (e.g., 5 x 10⁴ 5 x 10⁵ cells/well.)
- 2. Incubate cells for 24 96 hrs.
- 3. Add 10 µl WST-1 Reagent to each well. (**Note:** If the cells are cultured in different volume of culture medium, increase or decrease the amount of WST-1 Reagent correspondingly.)
- 4. Incubate the cells for 0.5 4 hrs in standard culture conditions. (**Note:** The appropriate incubation time depends on the individual cell type and cell concentration used. Therefore, it is recommended to determine the optimal incubation time for the particular experimental setup used.)
- 5. Shake for 1 min on a shaker to mix the contents.
- 6. Measure the absorbance of the treated and untreated samples using a microtiter plate reader at 420 480 nm according to the filters available for the plate reader. The reference wavelength should be ~ 650 nm.

Notes:

- Use the same amount of culture medium and WST-1 Reagent in an empty well as a blank control for the microtiter plate reader.
- The assay can be stopped by adding 10 µl of 1% SDS into each well, and gentle mixing.
- Phenol Red in culture medium does not significantly interfere with the reading.



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VIII. RELATED PRODUCTS:

Apoptosis Detection Kits & Reagents

Annexin V Kits & Bulk Reagents Caspase Assay Kits & Reagents

Mitochondrial Apoptosis Kits & Reagents

Nuclear Apoptosis Kits & Reagents

Apoptosis Inducers and Set

Apoptosis siRNA Vectors

Cell Fractionation System

Mitochondria/Cytosol Fractionation Kit

Nuclear/Cytosol Fractionation Kit

Membrane Protein Extraction Kit

Cytosol/Particulate Rapid Separation Kit

Mammalian Cell Extraction Kit

FractionPREP Fractionation System

Cell Proliferation & Senescence

Quick Cell Proliferation Assay Kit

Senescence Detection Kit High Throughput Apoptosis/Cell Viability Assay Kits

LDH-Cytotoxicity Assay Kit

Bioluminescence Cytotoxicity Assay Kit

Live/Dead Cell Staining Kit

Cell Damage & Repair

HDAC Fluorometric & Colorimetric Assays & Drug Discovery Kits

HAT Colorimetric Assay Kit & Reagents

DNA Damage Quantification Kit

Glutathione & Nitric Oxide Fluorometric & Colorimetric Assay Kits

Signal Transduction

cAMP & cGMP Assay Kits

Akt & JNK Activity Assay Kits

Beta-Secretase Activity Assay Kit

Adipocyte & Lipid Transfer

Recombinant Adiponectin, Survivin, & Leptin

CETP & PLTP Activity Assay & Drug Discovery Kits

Total Cholesterol Quantification Kit

Molecular Biology & Reporter Assays

siRNA Vectors

Cloning Insert Quick Screening Kit

Mitochondrial & Genomic DNA Isolation Kits

5 Minutes DNA Ligation Kit

20 Minutes Gel Staining/Destaining Kit

β-Galactosidase Staining Kit & Luciferase Reporter Assay Kit

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