MTT Cell viability Assay (1000 tests)
Catalog# TBS2003

Description

MTT assay is one of the most versatile and popular assays. It is based on the cleavage of the yellow tetrazolium salt MTT to purple formazan crystal by metabolic active cells. The formazan is then solubilized, and the concentration determined by optical density at 570 nm. The formazan color intensity is directly proportional to the number of living cells in the culture.

The MTT Cell Viability Assay Kit provides a convenient, sensitive, quantitative and reliable assay method for determination of the number of viable cells using standard microplate absorbance readers. Determination of cell growth rates is widely used in the testing of drug action, cytotoxic agents and screening other biologically active compounds. Reagents in the kit have been carefully formulated and optimized for sensitivity, assay robustness and automation.

Kit Components and Storage for 1000 tests

Part #	Name	Unit Size
A	MTT Assay Reagent	10 mL
B	Solubilizer	100 mL
Storage at –20°C.		
Shelf-life: 12 month after receipt.		

Applications

- **Cell proliferation:** effects of cytokines, growth factor, and nutrients.
- **Cytotoxicity and Apoptosis:** evaluation of toxic compounds, anti-cancer antibodies, toxins, environmental pollutants etc.
- **Drug discovery:** high-throughput screen for toxic and anticancer drugs.

Key Features

- **Safe:** Non-radioactive assay.
- **Sensitive and accurate:** As low as 950 cells can be accurately quantified. Multi-well microplate reader.
- **Convenient and high-throughput:** "Mix-incubate-measure" type assay. No wash and reagent transfer steps are involved.

Precautions

Reagents are for research use only. Normal precautions for laboratory reagents should be exercised while using the reagents. Please refer to Material Safety Data Sheet for detailed information.

Assay Procedures

1. **Cell culture:** Cells are cultured in a 96-well plate at 37°C. In general, cells should be seeded at densities between 1000 and 10,000 cells per well in order to reach optimal density within 48 to 72 hours.

2. **Cell treatments:** Add test compounds or controls in the wells incubate cells for the desired period of time (typically overnight). It is recommended that assays be run in duplicate or triplicate. The final volume of culture medium in each well should be 100 µL.

3. **Add MTT reagent:** Warm Reagent and to room temperature. Add 10 µL of MTT Reagent 100 µL of medium in per well Mix by tapping gently on the side of the tray or shake briefly on an orbital shaker, and incubate for 4 hours at 37°C. The volume of the reagent should be adjusted depending on the volume of cell culture.

4. **Add solubilizer:** Add 100 µL of the Solubilizer to each well. Mix gently on an orbital shaker for one hour at room temperature. The volume of the Solubilizer should be adjusted depending on the volume of cell culture.

5. **Measure OD value:** Measure OD value at 570nm for each well on an absorbance plate reader.

DATA analysis

Determine the average of the blank controls and subtract this amount from all absorbance values. Plot the corrected absorbance values at 570 nm against the concentration of the test compound. The data can be analyzed by non-linear regression analysis using Prism or another data analysis tool.

Related Product:

Resazurin Cell Viability Kit (TBS2001)
LDH Cytotoxicity Assay (TBS2002)
ATP Colorimetric/Fluorometric Assay Kit (TBS2010)
ADP Colorimetric/Fluorometric Assay Kit (TBS2020)
Caspase-3 Colorimetric Assay kit (TBS2030)
Alkaline Phosphatase Staining kit I-Red (TBS2080)
Alkaline Phosphatase Staining kit II-Blue (TBS2085)
Cytochrome C Oxidate Assay (TBS2115)
Cytochrome c Reductase Activity Assay (TBS2116)
Non-esterified Fatty Acid Assy (TBS2203)
Glycerol Colorimetric / Fluorometric Assy (TBS2204)
Cell Proliferation Colorimetric Assay (TBS2086)