MTS Cell Viability Assay (2000 tests)
Catalog# TBS2004

Description

TribioScience's MTS Cell Viability Assay Kit is a colorimetric method for sensitive quantification of viable cells in proliferation and cytotoxicity assay. The method is based on the reduction of MTS tetrazolium compound by viable cells to generate a colored formazan product that is soluble in cell culture media. This conversion is thought to be carried out by NAD(P)H-dependent dehydrogenase enzymes in metabolically active cells. The formazan dye produced by viable cells can be quantified by measuring the absorbance at 490-500 nm. The assay can be used for the measurement of cell proliferation in response to growth factors, cytokines, mitogens, and nutrients, etc. It can also be used for the analysis of cytotoxic compounds like anticancer drugs and many other toxic agents and pharmaceutical compounds. TribioScience's MTS assay is performed by adding the reagent directly into the cell culture media without the intermittent steps, which are required in the routine MTT assay. In addition, this high-throughput assay requires no washing or solubilization step and can be performed in 96-well microtiter plate.

Kit Components and Storage for 2000 tests

Name	Unit Size
MTS Assay Reagent	20 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

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

Precautions

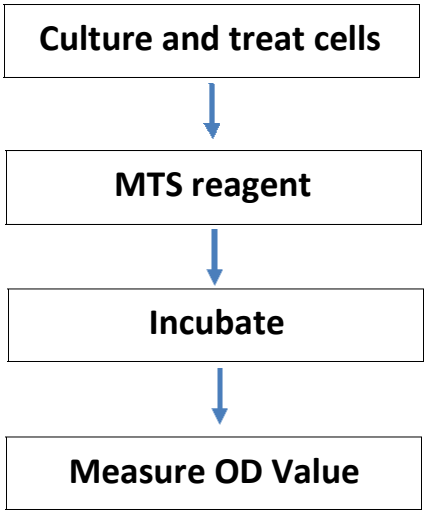
Reagents are for research use only. Normal precautions for laboratory reagents should be exercised while using the reagents. Please refer to Material Safety Data Sheet for detailed information.

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 MTS reagent:** Warm Reagent and to room temperature. Add 10 µL of MTS 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. **Measure OD value:** Measure OD value at 590nm 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 590 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)
MTT Cell Viability Assay (TBS2003)
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)