Tribioscience

MTS Cell Viability Assay (TBS2004, 20mL, Store at -20°C)

Description

TribioScience's MTS Cell Viability Assay Kit is a colorimetric method for sensitive quantification of viable cells in proliferation and cytotoxicity assay. This 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. 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

MTS Assay Reagent: 20 mL (10mL x2)
Storage at –20°C Stable for 2 years

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

Flexible: Convenient and high throughput.
Accurate: As low as 950 cells can be accurately quantified.
Simple and Safe: Single homogenous solution, non-radioactive assay.
Time-saving: Just "Add-incubate-measure" manner. 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 the 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 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 490nm for each well on an absorbance plate reader.

DATA analysis

Calculate the OD average of the blank controls and subtract it from all OD values. Plot the corrected OD values at 490 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)
XTT Cell Viability Assay (TBS2021)
CCK-8 Cell Viability Assay (TBS2022)
Mitochondrial Isolation (TBS2016)
Mitochondrial Complex I Activity (TBS2017)
NADH/NAD Colorimetric Assay (TBS2029)
Caspase-3 Colorimetric Assay kit (TBS2030)
Caspase-1 colorimetric Assay kit (TBS2040)
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)
Glycerol Colorimetric / Fluorometric Assy (TBS2204)
Cell Proliferation Colorimetric Assay (TBS2086)

Research Use Only