Servicebio® MTT Cell Proliferation and Cytotoxicity Assay Kit

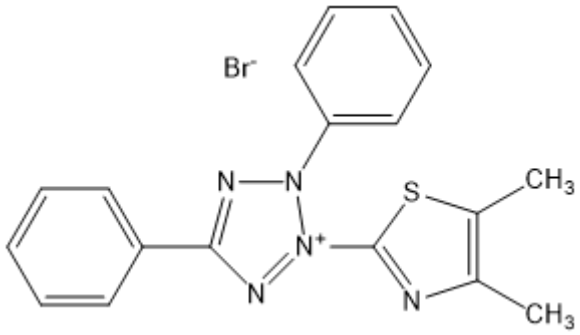
Cat.#：G4104

ProductInformation

ProductName	Cat.No.	Spec.
MTT Cell Viability Assay	G4104-100T	100T
	G4104-500T	500T

Description/Introduction

MTT is also called 3-(4,5-dimethyl-2-thiazolyl)-2,5-diphenyl-2-H-tetrazolium bromide (Thiazolyl Blue Tetrazolium Bromide). Its molecular formula is $C_{18}H_{16}BrN_5S$, and the molecular weight is 414.32.



The MTT Cell Viability Assay utilizes the well-established and widely used MTT reagent to determine mammalian cell viability. The redox potential in active mammalian cells reduces MTT to a strongly pigmented formazan product. After solubilization, the absorbance of the formazan can be measured with a microplate absorbance reader. The MTT Cell Viability Assay is a complete, optimized kit that provides all the reagents necessary for the detection of mammalian cell viability.

The redox potential in viable mammalian cells causes the water soluble MTT reagent (3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide) to convert to an insoluble formazan product. After solubilization of the formazan with the included SDS (sodium dodecyl sulfate) reagent, the concentration of the colorimetric probe is determined by an optical density measurement at 570 nm.

The MTT Cell Viability Assay provides a simple method for determination of mammalian cell viability using standard microplate absorbance readers. Simply prepare the MTT reagent, add it to the cells, solubilize the resulting formazan, and determine the optical density using a standard microplate reader.

Storage and Handling Conditions

Transport in wet ice; MTT solution, -20°C, protect from light; formazan dissolving agent, 4°C, protect from light; valid for 12 months.

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Component

Component Number	Component	G4104-100T	G4104-500T
G4104-1	MTT Solution	1mL	5×1 mL
G4104-2	Formazan Dissolving Agent	10 mL	50 mL
Protocol		1	

Assay Protocol / Procedures

1. For cell proliferation assay, it is recommended to seed 100 μL of 2000 cells per well; for cytotoxicity experiments, it is recommended to seed 100 μL of 5000 cells per well (depending on cell size and proliferation rate). Culture and transfection or drug pretreatment according to the needs of the experiment;
2. Add 10 μL of MTT solution to each well and incubate for 4 h in an incubator;
3. a. Add 100 μL of formazan dissolving agent to the well plate,
b. tap the well plate to mix evenly
c. incubate in the incubator for 2-4 hours to dissolve the formazan (the incubation time depends on the number of cells)
4. Measure the absorbance of each well at 570 nm. If 570 nm filter is not available, the 560-600 nm filter can be used instead.

Note:

1. Use a 96-well plate for detection. If the cell culture time is long, it should be pay attention to the problem of evaporation. The circle around the 96-well plate is the easiest to evaporate. You can discard the circle and add PBS, water or culture medium instead. You can also ease the evaporation by placing the 96-well plate near the water source in the incubator.
2. In order to reduce the error caused by the experimental operation, it is recommended to set up duplicate wells to avoid the generation of air bubbles when adding samples or shaking and mixing.
3. The MTT solution is yellow. Before use, it should be placed at room temperature in the dark and water bath at 20-25°C for a while until it is completely melted before use. Prolonged exposure to light will cause failure, do not use if the solution is grey green.
4. If the formazan dissolving agent is precipitated, it can be dissolved in a water bath at room temperature or 37°C to promote dissolution, and then it can be used after dissolving and mixing.
5. For your health and safety, please wear a lab coat and disposable gloves when operating.

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