5 mg/mL MTT solution

Cat. No. : PB180519
Size : 1mL×5 / 1mL×10

General Information

Product Form	Liquid
Concentration	5 mg/mL
Dissolvent	10 mM PBS
Storage	-5~-20°C, Shading Light
Shipping	Ice bag
Expiration date	18 months

Background

MTT (3-(4,5-dimethyl-2-thiazolyl)-2,5-diphenyl-2-H-tetrazolium bromide) is widely used for determination of cell proliferation and cytotoxicity. The MTT can be reduced by succinate dehydrogenase in mitochondria of living cells to form crystalline dark purple product formazan. Formazan was deposited in cells, but dead cells do not. The formazan can be solubilized in dimethyl sulfoxide (DMSO). The absorbance (OD value) was measured at the wavelength of 490 nm or 570 nm. The number or activity of living cells could be determined by the OD value. Within a certain range of cell numbers, the amount of MTT crystal formation was proportional to the number or activity of living cells.

Instructions for Use

1. Collect cells in the logarithmic growth phase and adjust them to the required concentration to inoculate them into 96-well plates. Each well has a volume of 200 μL, and the edges of 96-well plates are filled with sterile PBS or water. At the same time, zero adjustment Wells (culture medium, MTT, DMSO) and control Wells (cells, drug dissolution medium of the same concentration, culture medium, MTT, DMSO) were set up.
2. Cells were cultured at 5% CO_2 and 37°C until the experimental treatment was completed. Then, 20 μL of 5 mg/mL MTT solution was added to each well and the culture continued for 4 hours. If the culture medium contains components that can react with MTT, the culture medium needs to be removed and washed 2-3 times with sterile PBS before adding the MTT solution.
3. When terminating cell culture, carefully aspirate the culture medium from the Wells. If the cells are suspended, centrifuge them first, then aspirate and discard the supernatant of the culture medium.
4. Add 150 μL of DMSO to each well. Place the 96-well plate on a shaker and shake at low speed for 10 minutes to ensure the crystals are fully dissolved.
5. After selecting a wavelength of 490 nm on the enzyme-linked immunosorbent assay (ELISA) detector, the absorbance values of each well were measured and the results were recorded.

Notes

1. This product is only used for scientific research or further research, not for diagnosis and treatment.

2. This product is sterilized by 0.1 μm filtration.
3. It is necessary to pay attention to the aseptic operation and avoid the contamination.
4. The MTT solution decomposes easily in the light. Please avoid light during operation. Do not use MTT solution when it turns grey-green.
5. MTT solution will solidify at low temperature, please incubate the solution at 20-25°C water bath and use it when the solution is thoroughly dissolved.
6. Please mix MTT solution fully before use and do not store it at room temperature for along time. It can be stored at 2-8°C with shading light for a month.
7. Avoid repeated freeze-thaw cycles. It is recommended to aliquot the solution into smaller quantities for optimal storage.
8. MTT is carcinogenic, please take safety precautions and follow the procedures of laboratory reagent operation. All waste liquid should be handled in accordance with local regulations.