

Taunpan Blue Staining Solution (1%)

Cat #: A-CSH328

Size: 10mL, 50mL, 100mL

Storage: 2~8°C, avoid light (12 months)

Product Composition

Component	Size		Store at
Trypan Blue stain (1%)	50ml	100ml	2~8°C, and were protected from light

Product Description

Trypan Blue, also known as Cone Blue or Trypanosome Blue, is an anionic dye commonly used to assess cell viability. Trypan Blue cannot penetrate the intact cell membrane of viable cells, resulting in the exclusion of the dye and a phenomenon known as exclusion staining. In contrast, the increased permeability of the cell membrane in dead cells allows the dye to enter the cells, resulting in blue staining. The loss of cell membrane integrity is generally considered an indicator of cell death. Therefore, Trypan Blue staining provides a simple and rapid method to distinguish between live and dead cells.

A 1% Trypan Blue staining solution is commonly used to assess cell membrane integrity and cell viability. Live cells remain unstained, while dead cells appear pale blue. Trypan Blue can be engulfed by macrophages, making it suitable for vital staining of macrophages. After Trypan Blue staining, cell viability can be quantitatively assessed by direct counting under a microscope or by counting cells in photographs taken under a microscope. The staining process only takes 3-5 minutes, and the procedure is straightforward.

Usage

1. Cell Collection:

For adherent cells, digest the cells with trypsin-EDTA solution and collect them. For suspension cells, directly collect the

cells. After collection, centrifuge the cells at 1000 rpm for 5 minutes, discard the supernatant, and resuspend the cell pellet in 1 ml of PBS.

2. Trypan Blue Staining:

Add Trypan Blue staining solution (1%) to the cell suspension and gently mix. Stain at room temperature for 3 minutes (the staining time can be extended, but should not exceed 10 minutes).

3. Cell Counting:

Take a small amount of stained cells and count them using a hemocytometer. Under a microscope, blue-stained and swollen cells without luster can be observed as dead cells, while viable cells remain unstained and maintain a normal, glossy appearance.

For accurate quantification, at least 500 cells per sample should be counted, and the number of blue-stained cells and the total cell count should be determined. The formula for calculating cell viability is as follows:

Cell Viability = (Total Cell Count - Blue-Stained Cell Count) / Total Cell Count × 100%.

Staining Results

dead cell	blue
living cells	achromatic colour

Notes

1. Trypan Blue has slight toxicity to the human body, so please take precautions and handle with care.
2. Note that occasionally apoptotic bodies may also exhibit exclusion staining with Trypan Blue.
3. For your safety and health, please wear a lab coat and disposable gloves while performing the procedure.

Disclaimer

The reagent is only used in the field of scientific research, not suitable for clinical diagnosis or other purposes.