

Trypan Blue Staining Cell Viability Assay Kit

Catalog No. AR1175

Size 100 assays

Kit Component

Trypan Blue Staining solution (2X) 10ml
(Dilution: 1:2)

Cell diluents buffer 100ml

Storage

At 4°C for one year.

Introduction

Trypan blue, as one of cell staining dyes, has been proved to be excluded by alive cells, while could stain dead cells to blue. Through an optical microscope, the staining process can be observed and the number of cells can be quantitative counted. But whether the cells are suicide or are destroyed, this cannot be judged by this stain.

Antagene's Trypan Blue Staining Cell Viability Assay Kit is developed on this working principle. Usually, the cell whose cytomembrane lost its integrity is considered as a dead cell.

After staining with trypan blue, users can record the number of cells directly through microscope, or take a photo under microscope then record the number. In this way, the accurate cell livability can be quantified.

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Protocol

1. Cell Collection

- A. Digest anchorage-dependent cell with pancreatin or EDTA;
- B. For suspending cells, collect directly. And centrifuge the collected cells at 1000-2000g for 1 min, then abandon the supernatant;
- C. Collect cell suspension solution, dilute it properly with cell diluents buffer (kit component); or centrifuge and abandon the supernatant, estimate the number of cells. After that, add some cell diluents buffer (kit component) into the sediment and blew the re-suspending cells.

2. Staining

Pipette 100 μ l cell suspension solution into EP tube, add 100 μ l trypan blue staining working solution (Kit component and should be diluted 1:2 before use), then blew slightly and mix them thoroughly. 3-5 min later (staining time should not be too long), drip this solution on the cell counting plate to calculate the number.

3. Cell Viability Analysis

Pipette the cell suspension solution which was added the trypan blue staining working solution (Kit component and should be diluted 1:2 before use) onto the blood cell counting plate to count the number. Calculate the total number of cells and the number of cells dyed to blue respectively in the big quadrel.

$$\text{Cell Viability} = (\text{total number of cells} - \text{blue cell number}) / \text{total number of cells} \times 100\%$$

Note

1. This kit can be enough for 100 assays.
2. The concentration of cell sample should better be 1×10^6 /ml.
3. Control the staining time well, otherwise cells would be poisoned to die.
4. This product can be used to stain the growing anchorage-dependent cell.
5. When calculate cell number, the cell dilution 10^4 should be multiplied.

Hemocymeter calculation method:

$$\text{Cell number of 1 mm quadrel} \times 10^4 (\text{cell dilution}) = \text{actual cell number/ml}$$