台盼蓝染色液(0.4%)

货号： C0040
规格： 50mL/100mL
保存： 2-8℃保存，有效期 1 年。

产品介绍：

台盼蓝（Trypan Blue)或称台盼兰、锥虫蓝，是细胞活性染料，常用于检测细胞膜的完整性与细胞的存活率，是组织和细胞培养中最常用的死细胞鉴定染色方法之一。正常的活细胞细胞膜结构完整，能够排斥台盼蓝，细胞不会被染成蓝色；而丧失活性或细胞膜不完整的细胞可被台盼蓝染成蓝色。通常认为细胞膜完整性丧失，即可认为细胞已经死亡。

台盼蓝可被巨噬细胞吞噬，故可用于巨噬细胞的活体染色剂。凋亡小体也有台盼蓝拒染现象。台盼蓝染色后，通过显微镜下直接计数或显微镜下拍照后计数，就可以对细胞存活率进行比较精确的定量。染色时间只需 3-5 分钟，操作简单。

操作步骤：(*仅供参考*)

1. 收集细胞：

用胰酶和/或 EDTA 消化贴壁细胞，悬浮细胞可直接收集。收集细胞时用 1000-2000 rpm 离心 1 分钟，弃上清，制备单细胞悬液，并做适当稀释。

2. 台盼蓝染色：

细胞悬液与 0.4%台盼蓝溶液以 9:1 比例混匀（终浓度 0.04%），染色 3 分钟 (染色 3 分钟时间已经足够，但染色时间可以更长一些，但不宜超过 10 分钟) 。

3. 细胞计数：

吸取少量经过染色的细胞，用血细胞计数板计数。死细胞着蓝色并膨大，无光泽；活细胞不着色并保持正常形态，有光泽。通常要比较精确地进行定量，每个细胞样品至少数 500 个细胞。

细胞存活率（%）= 活细胞总数/（活细胞总数+死细胞总数）×100%

注意事项：

1. 染色时间不能太长，否则活细胞也会逐渐积累染料而着色，使检测结果偏低。
2. 染色前染液若有沉淀，需过滤除掉沉淀后再用。
3. 有潜在致癌危险，为了您的安全和健康，请穿实验服并戴一次性手套操作。

相关产品：

12100 DMEM(H)
31800 RPMIMedium1640
24800 通用细胞冻存液
H1025 Hanks，含钙镁，不含酚红（HBSS）
P1020 1×PBS, PH7.2-7.4, 0.01M，液体
T1300 胰蛋白酶—EDTA 消化液(0.25%)不含酚红
P1400 青链霉素混合液(100×)
M1020 MTT 细胞增殖及细胞毒性检测试剂盒

Trypan Blue Stain Solution, 0.4%

Cat: C0040
Size: 50ml/100ml
Storage: 2-8℃ , valid for 1 year.

Introduction

Trypan Blue Stain Solution, 0.4% is an azo dye, derived from toluidine. It is also known as diamine blue and Niagara blue. It is widely used as a vital stain to distinguish the viable cells from the non-viable cells. It selectively stains the dead tissues or cells blue, while live cells or tissues with intact cell membrane are not colored and are very selective in the compounds that pass through the membrane. So the solution is not absorbed by viable cells. However, it can pass through the cell membrane in a dead cell and so dead cells appear blue under the microscope. Live cells are excluded from staining so this staining method is also described as a dye exclusion method.

Trypan Blue Stain Solution, 0.4% is most commonly used in microscopy for cell counting.

Protocol(*for reference only*)

1. **Collecting Cells**
   Centrifuge an aliquot of cell suspension being tested for viability1 min at 1000-2000 rpm and discard supernatant. Resuspend the cell pellet in PBS.
2. **Trypan Blue Stain**
   Mix 1 part of Trypan Blue Stain Solution, 0.4% and 9 part of cell suspension (cell dilution). Incubate the mixture appoximately for 3 mins at room temperature.
3. **Cell Count**
   Take a drop of the trypan blue / cell mixture to a hemacytometer. Place the hemacytometer on the stage of a binocular microscope and focus on the cells. Non-viable cells will be stained blue. Count the unstained (viable) and stained (nonviable) cells separately in the hemacytometer.

$$\text{viable cells (\%)} = \frac{\text{total number of viable cells permL of aliquot}}{\text{total number of cells permL of aliquot}} \times 100$$

Note

1. The staining time should not be too long, otherwise the living cells will gradually accumulate dye and stain, which will make the detection result low.
2. If there is precipitation in the dyeing solution before dyeing, it should be filtered out and reused.
3. There is a potential cancer risk. For your safety and health, please wear laboratory clothes and disposable gloves.