Mayer's Hematoxylin Stain Solution (For IHC)

Introduction

Hematoxylin is a basic natural dye that stains cell nuclei. The primary component of nuclear chromatin is DNA; within the double helix structure of DNA, phosphate groups on the two nucleotide chains face outward, causing the exterior of the DNA double helix to carry a negative charge and exhibit acidic properties. Consequently, it readily binds to the positively charged hematoxylin basic dye via ionic or hydrogen bonds, resulting in staining.

This solution is a progressive hematoxylin staining solution designed for counterstaining tissue sections in immunohistochemistry (IHC). Typically, hydrochloric acid ethanol differentiation is not required, and the stained cell nuclei appear blue. This product is a ready-to-use working solution. The staining solution can be reused multiple times; however, staining performance will gradually diminish.

Storage

Store at room temperature protected from light, stable for 1 year. For optimal preservation, store at 4 °C.

Protocol

1. After immunohistochemical staining, immerse the tissue sections in Mayer's Hematoxylin Stain Solution (For IHC) for 0.5-2 min for light staining, or 5-10 min for strong staining. Rinse with distilled water for 1 min to remove excess stain.
2. (Optional) If the color is too deep, differentiate with differentiation solution (0.05%-0.5% hydrochloric acid solution) for a few seconds. Quickly rinse with distilled water and observe the staining result under the microscope.
3. Rinse with tap water for 10 min or blue with other bluing solutions for 3-10 min to ensure sufficient bluing.
4. The time for staining, differentiation, and bluing should all be optimized through pre-experiments. The differentiation step is optional.
5. Depending on the type of staining solution used, either mount the sections directly with a water-based mounting medium or dehydrate with gradient alcohol, clear with xylene, and then mount with neutral balsam.
6. Staining Result

Nucleus	Blue

Note

1. Light staining is recommended during the staining process. Usually, it is only necessary to distinguish the cell nucleus. Excessive color intensity may affect the cytoplasmic color.
2. For your safety and health, please wear lab coats and gloves during the experiment.
3. For research use only. Not to be used in clinical diagnostic or clinical trials.

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