Hematoxylin-Eosin (HE) Staining Plus Kit

Cat #: A-CSH270

Size: 4×100mL

Storage: 10-30 °C, Avoid exposure to light (1 year)

Product Description

Component	Volume	Store at
Reagent (A): Hematoxylin staining solution	100ml	10-30 °C, Avoid exposure to light
Reagent (B): Acid alcohol differentiation solution	100ml	10-30 °C
Reagent (C): Bluing solution	100ml	10-30 °C
Reagent (D): Eosin staining solution	100ml	10-30 °C, Avoid exposure to light

Hematoxylin-Eosin (HE) staining, also known as Hematoxylin-Eosin staining, is the most widely used staining method in routine histopathology. Hematoxylin is a dye extracted from logwood, and when oxidized, it is used together with a mordant (commonly trivalent iron or aluminum salts) to stain cell nuclei. HE staining is commonly used in pathological diagnosis, teaching, and research to observe the morphological structure of normal and pathological tissues. Special staining methods, enzyme histochemistry, immunohistochemistry, and other techniques used to identify or differentiate specific abnormal substances or components in diseased tissues or cells are based on the observation of HE-stained tissue sections. In HE-stained tissue sections, cell nuclei appear blue, and cytoplasm appears pink, creating a distinct contrast that facilitates observation and analysis.

This product does not contain harmful substances such as mercuric oxide or methanol. It provides good staining results for cell nuclei and has a wide range of applications, including staining of tissue paraffin sections, frozen sections, and tissue cells.

Usage

I. Paraffin section staining

(1) Deparaffinization

1. Bake the slides for 30-60 minutes, followed by deparaffinization with xylene (I) for 5-10 minutes.

2. Deparaffinize with xylene (II) for 5-10 minutes.

3. Wash with absolute ethanol for 1-5 minutes.

4. Wash with 95% ethanol for 1-5 minutes.

5. Wash with 75% ethanol for 1-5 minutes.

6. Rinse with tap water or distilled water.

(2) Staining

1. Stain with Hematoxylin solution for 5-20 minutes.

2. Rinse with tap water or distilled water for 5-10 seconds, observe the depth of cell nuclei under a microscope, and estimate the differentiation time.

3. Differentiate with acidified ethanol for 2-5 seconds (optional).

4. Rinse with tap water for 20-30 seconds, observe the depth of cell nuclei under a microscope to determine if it is appropriate, decide whether to blue or re-stain or further differentiate.

5. Blue the sections with a moderate staining intensity in a bluing solution for 5 minutes, followed by a 5-minute rinse with running water.

6. Treat with 95% ethanol for 1 minute.

7. Stain with Eosin solution for 15-30 seconds.

8. Wash with 75-85% ethanol for 30 seconds.

(3) Dehydration, Clearing, and Mounting

1. Wash with 95% ethanol (I) for 0.5-2 minutes.

2. Dehydrate with 95% ethanol (II) for 2-5 minutes.

3. Dehydrate with absolute ethanol (I) for 2-5 minutes.

4. Dehydrate with absolute ethanol (II) for 2-5 minutes.

5. Clear with xylene (I) for 1 minute.

6. Clear with xylene (II) for 1 minute and mount with neutral resin.

II. Frozen section staining

(1) No deparaffinization is required. After fixation, rinse directly with distilled water for 2-3 minutes.

(2) Follow the staining, deparaffinization, clearing, and mounting steps as in paraffin section staining.

III. Cell staining

(1) Fix with 4% paraformaldehyde for 10-20 minutes.

(2) Rinse twice with tap water for 2 minutes each time.

(3) Rinse twice with distilled water for 2 minutes each time.

(4) Follow the staining, deparaffinization, clearing, and mounting steps as in paraffin section staining, with shortened durations accordingly.

Staining Results

Nucleus	Blue
Cytoplasm and fibers	Red

Notes

1. The deparaffinization of sections should be as clean as possible. The series of ethanol solutions should be regularly replaced with fresh ones.
2. The differentiation time with hydrochloric acid-ethanol should be determined based on the thickness of the sections, tissue type, and age. Additionally, the rinsing time with tap water after differentiation should be sufficient to thoroughly wash away the acid.
3. The ethyl ether-ethanol mixed fixative is prepared by mixing an equal amount of ethyl ether and 95% ethanol, followed by the addition of an appropriate amount of acetic acid. Store it in a sealed container.
4. The staining time for frozen section should be kept as short as possible.
5. The D solution in this staining solution is alcohol-soluble Eosin, which is volatile. Please ensure proper sealing and storage.
6. For your safety and health, please wear a lab coat and disposable gloves during the procedure.

Disclaimer

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