Hematoxylin-Eosin (HE) Staining Kit

Cat #: A-CSH254

Size: 2×100 mL, 2×500 mL

Storage: Store in dark at 10~30°C (12 months)

Product Description

Hematoxylin-Eosin (HE) staining, also known as HE staining, is the most widely used staining method in routine histopathology. Hematoxylin is a dye extracted from logwood. When hematoxylin oxidized, it is used together with a counterstain (commonly trivalent iron or aluminum salts) to stain cell nucleus. HE staining is commonly used in pathological diagnosis, teaching, and research to observe the morphological structures of both normal and pathological tissues. Special staining methods, enzyme histochemistry, immunohistochemistry, and other techniques used to identify or differentiate specific substances and components in diseased tissues or cells are also performed based on the observation of HE-stained tissue sections. In HE-stained tissue sections, cell nucleus appear blue, while cell cytoplasm appears red, 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 nucleus and has a wide range of applications, including tissue paraffin sections, frozen sections, and staining of tissue cells.

Materials Supplied and Storage Conditions

Components	Size (2×100mL)	Size (2×500mL)	Storage conditions
Reagent A: Hematoxylin Dye	100 mL	500 mL	Store in dark at 10~30°C
Reagent B: Eosin Dye	100 mL	500 mL	Store in dark at 10~30°C

Procedure

Paraffin Section Staining

1. Dewaxing

1). Bake the sections for 30-60 minutes, dewax with xylene (I) for 5-10 minutes.

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

3). Wash with 100% 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 Dye for 5-20 minutes.

2). Rinse with tap water or distilled water for 5-10 seconds, observe the color of cell nucleus under a microscope to estimate the differentiation time.

3). Differentiate with 1% hydrochloric acid ethanol (hydrochloric acid : 75% ethanol = 1 : 99) for 2-5 seconds (optional).

4). Rinse with tap water for 20-30 seconds, observe the suitability of the color of cell nucleus under a microscope, decide whether to blue or whether re-staining or further differentiation is needed.

5). Blue the sections with tap water for 5 minutes when the staining is of moderate color.

6). Treat with 95% ethanol for 1 minute.

7). Stain with Eosin Dye 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 100% ethanol (I) for 2-5 minutes.

4). Dehydrate with 100% ethanol (II) for 2-5 minutes.

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

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

Frozen Section Staining

1. No need for dewaxing, rinse directly with distilled water for 2-3 minutes after fixation with fixative.
2. Follow the staining, deparaffinization, clearing, and mounting steps of paraffin section staining.

Cell Staining

1. Fix with 4% paraformaldehyde for 10-20 minutes.
2. Rinse twice with tap water, 2 minutes each time.
3. Rinse twice with distilled water, 2 minutes each time.
4. Follow the staining, deparaffinization, clearing, and mounting steps of paraffin section staining, with corresponding shortened durations.

Staining Results

Cell nucleus	Blue
Cell cytoplasm, fibers	Red

Notes

1. The dewaxing of the sections should be as thorough as possible, and the series of ethanol should be regularly replaced with fresh solutions.
2. The differentiation time of hydrochloric acid ethanol should be determined based on the thickness of the sections, tissue type, and its age. Additionally, an adequate rinsing time with tap water after differentiation is necessary to thoroughly wash away the acid.
3. The ethyl ether-ethanol mixed fixative is prepared by mixing equal amounts of ethyl ether and 95% ethanol, and then adding a suitable amount of acetic acid. It should be stored in a tightly sealed container.
4. The staining time for frozen sections should be kept as short as possible.
5. Reagent B 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 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.