Grimelius Silver Stain Kit

Cat #: A-CSH362

Size: 4×50mL, 4×100mL

Storage: Store in dark at 2~8°C (3 months)

Materials Supplied and Storage Conditions

Components		Size (4×50mL)	Size (4×100mL)	Storage conditions
Reagent A: Silver Staining Solution	A1: Acetate buffer solution	6 mL	12 mL	Store in dark at 10~30°C
	A2: Silver staining solution	3 mL	6 mL	Store in dark at 2~8°C
	A3: Distilled water	51 mL	102 mL	10~30°C
Before use, mix A1:A2:A3 in a ratio of 2:1:17 to prepare the Silver Staining Solution. This solution is for immediate use only and cannot be stored.				
Reagent B: Reducing Solution	B1: Reductant 1	0.5 g	1 g	Store in dark at 10~30°C
	B2: Reductant 2	2.5 g	5 g	10~30°C
	B3: Distilled water	50 mL	100 mL	10~30°C
Before use, thoroughly mix B1, B2, and B3 to prepare the Reducing Solution. This solution is for immediate use only and cannot be stored.				
Reagent C: 5% sodium thiosulfate solution		50 mL	100 mL	10~30°C
Reagent D: Neutral red staining solution		50 mL	100 mL	Store in dark at 10~30°C

Product Description

Carcinoid tumors are a type of tumor that arises from the diffuse neuroendocrine system of organs such as the stomach, intestines, and bronchi. These organs, along with other parts derived from the embryonic gut, such as the thyroid, lungs, and esophagus, contain endocrine cells and chemoreceptive cells that belong to the APUD (amine precursor uptake and decarboxylation) system. Essentially, APUD cells are a group of endocrine cells capable of synthesizing, storing, and releasing specific biogenic amines or peptide hormones. This assay kit utilizes the silver nitrate method and is used for staining tissue specimens embedded in paraffin, prepared using conventional techniques, to identify argentaffin cells.

Procedure

1. Fix the tissue and perform routine dehydration and embedding.
2. Rinse the tissue sections twice with distilled water.
3. Immerse the sections in preheated Silver Staining Solution at 60°C for 3 hours in a constant temperature chamber.
4. Briefly rinse the sections with distilled water.
5. Place the sections in the preheated Reducing Solution at 50°C for 1 minute.
6. Rinse the sections with distilled water and observe the depth of positive particles under a microscope.
7. Treat the sections with 5% sodium thiosulfate solution for 1 minute.
8. Rinse the sections with running water for 3-5 minutes.
9. Optional: Perform a contrast staining using Neutral red staining solution.
10. Rinse the sections with distilled water for 2 minutes.
11. Perform routine dehydration, clearing, and seal with neutral mounting medium.

Staining Results

Silver granules	Brown-black color
Cell nuclei	Red

Notes

1. Tissues should be fresh and promptly fixed; otherwise, peptides within the cells can easily degrade and lose their ability to reduce silver.
2. After rinsing the sections with distilled water in step 6, examine them under a microscope. If the positive signal is weak, you can repeat the rinsing with distilled water and then immerse the sections in the preheated Silver Staining Solution at 60°C for approximately 30 minutes. Subsequently, transfer them sequentially into the preheated fresh Reducing Solution. This procedure enhances the reaction efficiency.
3. The rinsing with distilled water in step 4 should be done quickly. If necessary, use filter paper to remove excess silver solution around the sections before placing them into the Reducing Solution.
4. Dispose of the used staining solution according to the disposal requirements.
5. For your safety and health, please wear lab attire 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.