

Masson-Fontana 黑色素染色液

货号: G2032

规格: 3×50mL

保存: 2-8℃, 避光保存, 有效期 2 个月。

产品组成:

名称	3×50mL	保存
试剂(A): Fontana 氨银溶液	50mL	2-8℃, 避光
试剂(B): 海波溶液	50mL	室温
试剂(C): 中性红染色液	50mL	室温, 避光

产品介绍:

黑色素属于非血源性内生色素, 是一组由黑色素母细胞产生的颜色从浅棕色到黑色的色素。这种色素通常出现在皮肤表皮、眼睛、大脑的黑质和毛囊中。黑色素有一个显著的物理性质, 即完全不溶解于大多数有机溶剂——几乎可以肯定是由于黑素体中已形成的黑色素可与蛋白质紧密结合。黑色素另一个物理性质是能够被强氧化剂漂白, 尽管这个过程是缓慢的。在病理情况下, 这种色素也可出现在良性痣细胞瘤中和恶性黑色素瘤中。在常规 HE 染色中不呈黑色而是呈棕黄色或棕黑色。许多方法可用于识别黑色素和黑色素生成细胞, 如还原方法, 如 Masson-Fontana 银技术和 Schmorl 三价铁-铁氰化钾还原实验; 酶方法(如多巴反应); 荧光方法; 免疫组织化学。

Masson-Fontana 黑色素染色利用黑色素具有将银氨溶液还原为金属银特性即嗜银反应原理来显示黑色素, 染色后黑色素呈黑色, 该法属于常用的黑色素特殊染色法, 效果较其他染色理想。

自备材料:

10%中性福尔马林固定液、温箱或水浴锅、蒸馏水

操作步骤: (仅供参考)

- 1、固定: 10%中性福尔马林是最适合的固定液, 应当避免使用铬酸盐和氧化汞等固定液。
- 2、切片: 所有类型的切片都可以染色, 树脂切片可能需要做一些针对性调整。
- 3、将实验切片及对照切片入蒸馏水中。
- 4、入 Fontana 氨银溶液, 避光浸染 12-24h 或 56℃温箱孵育 30-40min。蒸馏水浸洗 5-6 次, 每次 1-2min。
- 5、入海波溶液处理切片 1-5min。自来水处理 3-5min。
- 6、(可选)入中性红染色液, 复染 5min。蒸馏水冲洗 1min。
- 7、95%乙醇、无水乙醇脱水。
- 8、二甲苯透明、中性树胶封固。

染色结果:

黑色素、嗜银细胞颗粒	黑色
细胞核	红色

注意事项:

- 1、注意镜下控制 Fontana 氨银溶液的染色时间, 以黑色素颗粒呈现黑色为宜。如果染色时间过长, 脂褐素、胆色素、橙色血质也会呈黑色, 不易于黑色素区分。
- 2、与 Fontana 氨银溶液接触的器皿应严格清洗, 否则可能不残余污染物发生化学反应。
- 3、长期暴露在 56℃下的切片, 可能会产生细小的沉着物。
- 4、脆弱的样本可能要涂上一层火棉胶, 避免切片从载玻片上翘起。
- 5、为了您的安全和健康, 请穿实验服并戴一次性手套操作。

Fontana-Masson Stain Kit (Melanin Stain)

Cat: G2032

Size: 3×50mL

Storage: 2-8℃, avoid light, valid for 2 months.

Kit Components

Reagent	3×50mL	Storage
Reagent(A): Fontana Ammoniac Silver Solution	50mL	2-8℃, avoid light
Reagent(B): Hypo Solution	50mL	RT
Reagent(C): Neutral Red Staining Solution	50mL	RT, avoid light

Introduction

Melanin is a kind of Nonhematogenous endogenous pigment, which is a group of pigments from light brown to black. This pigment is usually found in the skin, eyes, the substantia nigra of the brain and hair follicles. Melanin has a significant physical property. Because the melanin formed in melanosome is closely bound with protein, melanin is completely insoluble in most organic solvents. Another physical property of melanin is that it can be slowly bleached by strong oxidant. Under pathological condition, this kind of pigment can also appear in benign nevus cell tumor and malignant melanoma. Many methods can be used to identify melanin and melanogenesis cells, such as reduction method: Masson Fontana silver method and Schmorl trivalent iron potassium ferricyanide reduction experiment, enzyme method (such as DOPA reaction), fluorescence method, immunohistochemistry, etc.

Fontana-Masson Stain Kit (Melanin Stain) shows melanin by the argentaffin reaction, that is, melanin has the property of reducing silver ammonia solution to metallic silver. After dyeing, melanin is black. This method belongs to the commonly used special melanin dyeing method, and the effect is better than other dyeing methods.

Self Provided Materials

10% Neutral Formalin Fixative, Incubator or Water Bath, Distilled Water

Protocol(for reference only)

1. Tissue fixation, conventional dehydration and embedding.
2. Conventionally dewax to water.
3. Wash the section and control gently with distilled water.
4. Incubate with Fontana Ammoniac Silver Solution avoid light at room temperature overnight or 56℃ incubator for 30-40min.
5. Wash with distilled water fifth to sixth and two mins for each time. Treat with Hypo Solution for 1-5min.
6. Wash with tap water for three to four times.
7. (optional) Re-dye with Neutral Red Staining Solution for 5mins. Wash with distilled water for 1min.
8. Conventional dehydration, conventional transparency, synthetic resin seal.

Result

Melanin, Argyrophil Granules	Black
Nucleus	Red

Note

1. Pay attention to control the staining time of Fontana Ammoniac Silver Solution under the microscope, and it is better for melanin particles to appear black. If the staining time is too long, lipofuscin, bile pigment and orange blood will also be black, which is not easy to distinguish melanin.
2. Utensils in contact with Fontana Ammoniac Silver Solution should be cleaned strictly, otherwise there may be no chemical reaction of residual pollutants.
3. Samples exposed to 56℃ for a long time may produce fine precipitates.
4. The fragile sample may be coated with a layer of collodion to prevent the slice from lifting from the slide.
5. For your safety and health, please wear experimental clothes and disposable gloves.