改良 Hale 胶体铁黏多糖染色试剂盒

货号：G4600
规格：4×20mL/4×50mL
保存：2-8°C，避光保存，有效期 6 个月。

产品组成：

名称		4×20mL	4×50mL	保存
试剂(A): Hale 染色工作液	A1:Hale 染色液 A	10mL	25mL	室温，避光
	A2:Hale 染色液 B	10mL	25mL	室温
临用前，取 A1、A2 等量混合即为 Hale 染色工作液，不宜提前配制。				
试剂(B): 弱酸溶液		20mL	50mL	室温
试剂(C): Perls 染色工作液	C1: Perls 染色液 A	10mL	25mL	室温，避光
	C2: Perls 染色液 B	10mL	25mL	室温
临用前，取 C1、C2 等量混合即为 Perls 染色工作液，不宜提前配制。				
试剂(D): Perls 复染液		20mL	50mL	室温，避光

自备材料：

载玻片、湿盒、普通光学显微镜、系列乙醇、蒸馏水、去离子水

产品介绍：

黏液物质染色有多种方法，如 AB-PAS 染色、黏液 HID-AB 染色、标准阿利新蓝染色等。以上方法大多是利用阿利新蓝(Alcian)属于阳离子染料可与酸性基团结合，也即阿利新蓝与组织内含有的阴离子基团如羧基和硫酸根形成不溶性复合物这一原理。

胶体铁粒子在酸性条件下也可以和酸性粘液质紧密结合形成不溶性复合物，然后利用普鲁士蓝反应使酸性黏多糖呈现蓝色，改良 Hale 胶体铁黏多糖染色法较阿利新蓝法着色更深且不易被洗脱。常用于诊断肾嫌色细胞癌。

操作步骤：(*仅供参考*)

1. 切片脱蜡至水。
2. 弱酸溶液浸泡切片 5min 进行预处理。
3. 直接浸入新配 Hale 染色工作液染色 40~60min，弱酸溶液冲洗 3-4 次，每次 2min。
4. 新制 Perls 染色工作液滴染 10min，蒸馏水洗 3-4 次。
5. Perls 复染液滴染 3-5min，稍水洗。
6. 梯度乙醇脱水，二甲苯透明，中性树脂封片。

染色结果：

酸性黏多糖/含铁血黄素	蓝色
细胞核	红色

注意事项：

1. 改良 Hale 染色液染色时间需要严格控制在 40~60min 之间，
2. 改良 Hale 染色液染色需要在酸性条件下进行，存放时间较长的试剂盒建议自行新配 3%乙酸溶液进行切片预处理。
3. 含铁血黄素也会和 Perls 染液反应形成蓝色沉淀，建议设置阴性对照以排除干扰。
4. 已开封试剂应在开封后 6 个月内使用完，每次用后应及时拧紧瓶盖，以免挥发或变质。
5. 为了您的安全和健康，请穿实验服并戴一次性手套操作。

Modified Hale's Colloidal Iron Mucin Stain Kit

Cat:G4600
Size:4×20mL/4×50mL
Storage:2-8℃,avoid light,valid for 6 months.

Kit Components

Reagent		4×20mL	4×50mL	Storage
Reagent(A): Hale Stain Solution	A1:Hale stain A	10mL	25mL	RT,avoid light
	A2:Hale stain B	10mL	25mL	RT
Before use,mix reagent A1 and A2 equally to form Hale Stain Solution,which can not keep for long.				
Reagent(B): Weak Acid Solution		20mL	50mL	RT
Reagent(C): Perls Stain Solution	C1: Perls stain A	10mL	25mL	RT,avoid light
	C2: Perls stain B	10mL	25mL	RT
Before use,mix reagent C1 and C2 equally to form Hale Stain Solution,which can not keep for long.				
Reagent(D): Perls Counterstain Solution		20mL	50mL	RT,avoid light

Self Provided Materials

Slide, Wet Box,Optical Microscope,Series Ethanol, Distilled Water, Deionized Water

Introduction

There are many methods for mucus staining, such as AB-PAS staining method, HID-AB staining method and standard Alcian blue staining method.Most of the above methods are based on the principle that Alcian blue belongs to cationic dye and can be combined with acid group, that is to say, alixin blue forms insoluble complex with anionic group such as carboxyl group and sulfate group in tissue.

Under acid condition, colloidal iron particles can also combine with acid mucilage to form insoluble complex. Then, Prussian blue reaction is used to make the complex appear blue. The modified hale's colloidal iron mucin staining method is darker than alixin blue staining method and is not easy to be eluted. It is often used to diagnose renal chromophobe cell carcinoma.

Protocol(*for reference only*)

1. Dewax the section to water conventionally.
2. Soak the slices in Weak Acid Solution for 5min for pretreatment.
3. Directly immerse in the new Hale Stain Solution for 40-60min,Wash with Weak Acid Solution for 3-4 times, 2mins for each time.
4. Drip new Perls Stain Solution on the section and dye for 10min,Wash with distilled water for 3-4 times.
5. Re-dyeing with Perls Counterstain Solution for 3-5min,Wash slightly with water.
6. Dehydrate with gradient ethanol, transparent with xylene, and seal with neutral resin.

Result

Acid Mucopolysaccharide / Hemosiderin	Blue
Nucleus	Red

Note

1. The dyeing time of the Modified Hale's Colloidal Iron Mucin Stain Kit should be strictly controlled between 40 and 60 mins.
2. The stain of Modified Hale's Colloidal Iron Mucin Stain Kit needs to be carried out in acid condition. For the long-term storage kit, it is suggested to prepare 3% acetic acid solution for section pretreatment.
3. Hemosiderin also reacts with Perls to form blue precipitate. It is suggested to set negative control to eliminate interference.
4. The unsealed reagent shall be used up within 6 months after unsealing, and the cap shall be tightened timely after each use to avoid volatilization or deterioration.
5. For your safety and health, please wear experimental clothes and disposable gloves.