AB-PAS 染色试剂盒

货号： G1285
规格： 6×50mL/6×100mL
保存： 2-8℃，避光保存，有效期 6 个月。

产品组成：

名称	6×50mL	6×100mL	保存
试剂（A）：阿利新蓝染色液	50mL	100mL	2-8℃，避光
试剂（B）：氧化剂	50mL	100mL	2-8℃，避光
试剂（C）：Schiff 染色液	50mL	100mL	2-8℃，避光
试剂（D）：苏木素染色液	50mL	100mL	室温，避光
试剂（E）：酸性分化液	50mL	100mL	室温
试剂（F）：Scott 蓝化液	50mL	100mL	室温

产品介绍：

糖原染色是病理学中常规的染色方法之一，McManus 在 1946 年最先使用 PAS 技术显示黏蛋白，该法常用来显示糖原和其他多糖，该染色液不仅能够显示糖原，还能显示中性黏液性物质和某些酸性物质。

阿利新蓝和 PAS 技术联合使用可鉴别同一组织切片中的中性黏蛋白和酸性黏蛋白。这种技术也常用作广泛检测黏蛋白的手段。该技术染色阴性，可明确断定该物质不是黏蛋白。在大多数方法中，切片先经标准的阿利新蓝（pH 值为 2.5）染色，在使用 PAS 技术。阿利新蓝可将唾液黏蛋白、硫黏蛋白和蛋白多糖染成蓝色。PAS 技术可将中性黏蛋白染成深红/红紫色，同时将既含中性黏蛋白有含酸性黏蛋白的组织和细胞染成深浅不同的紫色，这是有于阿利新蓝与 Schiff 试剂结合并反应。上述染色常可出现在含有中性黏蛋白和唾液黏蛋白的小肠杯状细胞中。

阿利新蓝是类铜钛花青染料，这种阳离子染料与酸性基团结合，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。分子中带正电荷的盐键与酸性黏蛋白多糖物质中带负电荷的酸性基团结合形成不溶性的复合物而呈蓝色，再与 PAS 进行复合染色，就能显示三种不同黏液物质成分。

自备材料：

蒸馏水、系列乙醇

操作步骤：(*仅供参考*)

1. 切片脱蜡至水，蒸馏水水洗 2min。
2. 阿利新蓝染色液染色 10-20min。蒸馏水洗 3 次，每次 1-2min。
3. 放入氧化剂中进行氧化 5min。自来水冲洗，蒸馏水浸洗 2 次。
4. 入 Schiff 染色液 浸染 10-20min。
5. 倾去 Schiff 染色液，流水冲洗 10min。
6. 苏木素染色液染核 1-2min，水洗。
7. 用酸性分化液分化 2-5s，水洗。
8. 用 Scott 蓝化液返蓝 3min，水洗 3min。
9. 逐级常规乙醇脱水，二甲苯透明，中性树胶封固。

染色结果：

糖原、中性黏蛋白、各种糖蛋白	紫红色
酸性黏蛋白（硫黏蛋白和唾液黏蛋白）	蓝色
蛋白多糖和透明质酸	蓝色
备注：含有中性黏蛋白和酸性黏蛋白的细胞或组织可染成不同程度的蓝紫色至紫色。	

注意事项：

1. 切片脱蜡应尽量干净，否则影响染色效果。
2. 氧化剂氧化时间不宜过久，氧化时的温度以 18-22℃最佳。

3. 试剂（A）、试剂（B）、试剂（C）应置于 4℃密闭保存，使用时避免接触过多的阳光和空气。使用前，最好提前 30min 取出恢复到室温后，避光暗处使用。
4. 酸性分化液应经常更换新液，其分化时间应该依据切片厚薄、组织的类别和酸性分化液的新旧而定，另外分化后自来水冲洗时间应该足够。
5. 切片在氧化剂和 Schiff 染色液中作用时间非常重要，该依据切片厚薄、组织的类别等决定。
6. 如用苏木素染色液复染细胞核时一定要淡染，以免影响阳性物质观察，目的是防止胞浆或黏蛋白着色而掩盖阿利新蓝的颜色。
7. 研究表明，阿利新蓝-PAS 联合技术的染色顺序可影响最终结果。PAS 技术在阿利新蓝染色之前时，中性黏蛋白和糖原可染成紫色。与此相反，阿利新蓝染色在 PAS 技术之前时，则可将这些物质染成预期的紫红色。
8. 为了您的安全和健康，请穿实验服并戴一次性手套操作。

Alcian Blue Periodic Acid Schiff (AB-PAS) Stain Kit

Cat: G1285
Size: 6×50mL/6×100mL
Storage:2-8℃, avoid light, valid for 6 months.

Kit Components

Reagent	6×50mL	6×100mL	Storage
Reagent (A):Alcian Blue Staining Solution	50mL	100mL	2-8℃, avoid light
Reagent (B):Oxidant	50mL	100mL	2-8℃, avoid light
Reagent (C):Schiff Reagent	50mL	100mL	2-8℃, avoid light
Reagent (D):Hematoxylin Solution	50mL	100mL	RT, avoid light
Reagent (E):Acidic Differentiation Solution	50mL	100mL	RT
Reagent (F):Scott Bluing Solution	50mL	100mL	RT

Introduction

Glycogen staining is one of the conventional staining methods in pathology. McManus first used PAS technology to display mucin in 1946. This method is often used to display glycogen and other polysaccharides. The staining solution can not only display glycogen, but also show neutral mucilaginous substances and some acidic substances.

The combination of alcian blue and PAS technology can identify the neutral mucin and acid mucin in the same tissue section. This technique is also commonly used to detect mucins. The staining result of this technique is negative, which can clearly conclude that the substance is not mucin. In most methods, sections are first stained with standard alcian blue (pH 2.5) and then follow PAS technology. Alcian blue can dye salivary mucin, hiomucin and proteoglycan blue. PAS technology can dye neutral mucin into deep red or red purple, and at the same time dye tissues and cells containing both neutral mucin and acid mucin into different shades of purple, which is due to the combination and reaction of alcian blue and Schiff Reagent. The above staining often occurs in goblet cells of small intestine containing neutral mucin and salivary mucin.

Alcian blue is a kind of copper titanium cyan dye. This kind of cationic dye combines with acid group, that is, alcian blue forms insoluble complex with anion group such as carboxyl group and sulfate group in the tissue. The salt bond with positive charge in the molecule combines with the acid group with negative charge in the acidic mucopolysaccharide substance to form an insoluble complex, which is blue, and then combine with PAS for compound dyeing, so as to display three different mucilage substance components

Self Provided Materials

Distilled water, Series of ethanol

Protocol (*for reference only*)

1. Dewax to distilled water, then rinse in distilled water for 2min.
2. Stain with Alcian Blue Staining Solution for10-20min.
3. Rinse in distilled water three times for each time 1-2min.
4. Treat by Oxidant for 5min. Rinse in tap water and rinse in distilled water twice.
5. Soak in Schiff Reagent and stain for 10-20min.Then wash with running water for 10min.
6. Stain with Hematoxylin Solution for1-2min, then wash with water.
7. Differentiate by Acidic Differentiation Solution for 2-5s, then wash with water.
8. Blue with Scott Bluing Solution for 3 min and wash with water for 3 min.
9. Dehydrate by series of ethanol, transparent by xylene and seal with resinene.

Result

Glycogen, neutral mucins and various glycoproteins	Purplish Red
Acidic mucins (sulfated and carboxylated)	Blue
Proteoglycans, hyaluronic acid	Blue
Note: the cells or tissues that containing neutral mucins and acidic mucins can be dyed different shades of blue purple to purple.	

Note

1. Section dewaxing should be as clean as possible, otherwise it will affect the dyeing effect.
2. The oxidation time of Oxidant should not be too long, and the best temperature is 18-22 ℃.
3. Reagent A, B and C should be kept in 4 ℃ airtight storage, and avoid too much sunlight and air during use. Before use, it is better to take it out in advance and restorm room temperature, and use it in dark.
4. Acidic Differentiation Solution should be replaced frequently, and the differentiation time should be determined according to the thickness of section, the type of tissue and the old and new of Acid Differentiation Solution. In addition, the washing time of tap water after differentiation should be enough.
5. The time of action in Oxidant and Schiff Reagent is very important, which depends on the thickness of section and the type of tissue.
6. When re-dyeing with Hematoxylin Solution, light dyeing is required to avoid affecting the observation of positive substances. The purpose is to prevent the cytoplasm or mucin staining from covering up the color of alcian blue.
7. The results show that the dyeing sequence of Alcian Blue-PAS Stain can affect the final results. When PAS Staining is carried out before Alcian Blue Staining, neutral mucin and glycogen can be dyed purple. In contrast, Alcian Blue can dye these substances to the expected purplish red color before PAS Staining.
8. For your safety and health, please wear experimental clothes and disposable gloves.