

阿利新蓝染色试剂盒(pH=1.0)

货号: G1563

规格: 3×50mL/3×100mL

保存: 2-8℃, 避光保存, 有效期 6 个月。

产品组成:

名称	3×50mL	3×100mL	保存
试剂(A): Alcian 酸化液	50mL	100mL	室温
试剂(B): Alcian 染色液	50mL	100mL	2-8℃, 避光
试剂(C):核固红染色液	50mL	100mL	室温, 避光

产品介绍:

阿利新蓝(Alcian)又称爱先蓝或阿尔辛蓝等,是一种类铜钽花青共轭染料,最初用于纺织纤维染色。这种阳离子染料与酸性基团结合,即阿尔辛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。阿利新蓝由中央含铜的酞菁环与四个异硫脲基通过硫醚键相连而成。该异硫脲基呈中度碱性,使阿利新蓝带阳离子。阿利新蓝使碳水化合物着色的确切机制不明,普遍认为是阳离子的异硫脲基通过静电与组织内的多聚阴离子相连。如含羧基和硫酸根的酸性黏液物质的羧基和硫酸根形成不溶性复合物,即染料分子中带正电荷的盐键和酸性黏液物质中带负电荷的酸性基团结合呈蓝色。

利用染液的不同 pH 值可判定粘液物质的类属。在 pH=1 时,羧基不能离子化因而不能着染,但硫酸基可以被显示。在 pH=2.5 的时候,带羧基的粘液质(如蛋白多糖/透明质酸以及上皮酸性黏蛋白)着色良好而硫酸化粘液质着染不佳。中性黏液质如胃黏膜和 Brunner 腺体部位的中性黏蛋白不能与阿利新蓝反应着色。常用于粘液性上皮肿瘤的鉴别和肿瘤中是否含有粘液物质的证明。

操作步骤:(仅供参考)

1. 二甲苯脱蜡,通过梯度乙醇后,入蒸馏水水化 2min。
2. 入 Alcian 染色液浸染 30min。蒸馏水洗 30s。
3. Alcian 酸化工作液稍洗(按 Alcian 酸化液:蒸馏水=1:2 的比例配制)。
4. 不经水洗,直接用滤纸吸干多余的 Alcian 酸化工作液。
5. 入核固红染色液复染 5min。蒸馏水洗 30s。
6. 常规乙醇脱水,二甲苯透明,中性树脂封片。

染色结果:

硫酸粘蛋白	蓝色
非硫酸化粘液物质不着色	不着色
细胞核	浅红色

注意事项:

1. 固定液推荐采用 10%中性福尔马林。
2. 该法可区分鉴别硫酸黏蛋白和蛋白多糖。
3. 染色过程中可根据实验要求调整染色时间。
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。

Alcian Blue Stain Kit, pH 1.0

Cat: G1563

Size: 3×50mL/3×100mL

Storage: 2-8℃, avoid light, valid for 6 months.

Kit Components

Reagent	3×50mL	3×100mL	Storage
Reagent (A): Alcian Acidic Solution	50mL	100mL	RT
Reagent (B): Alcian Staining Solution	50mL	100mL	2-8℃, avoid light
Reagent (C): Nuclear Fast Red Solution	50mL	100mL	RT, avoid light

Introduction

Alcian blue is a kind of copper titanium cyan conjugate dye, which was originally used for textile fiber dyeing. This kind of cationic dye combines with acid group, that is, alcian blue forms insoluble complex with anionic group such as carboxyl group and sulfate group. Alcian blue is composed of copper containing phthalocyanine ring in the center and four isothioureia groups connected by thioether bond. The isothioureia group is moderately alkaline, which makes alcian blue cationic.

According to the different pH value of dye solution, the genus of mucus can be determined. When pH value is 1, the carboxyl group cannot be ionized and thus cannot dye, but the sulfuric acid group can be shown. When pH value is 2.5, the mucin with carboxyl group (such as proteoglycan / hyaluronic acid and epithelial acid mucin) is well dyed, while the sulfated mucin is poorly dyed. The neutral mucin in gastric mucosa and Brunner gland could not react with alcian blue. It is often used to distinguish mucinous epithelial tumors and to prove whether there is mucinous substance in tumors.

Protocols(for reference only)

1. For paraffin sections, dewax to distilled water.
2. Stain with Alcian Staining Solution for 30mins. Wash in running tap water.
3. Slightly wash in Alcian Acidic Working Solution(prepare according to the ratio of Alcian Acidic Solution: distilled water is 1:2).
4. Re-dyeing with Nuclear Fast Red Solution for 5mins. Wash in running tap water.
5. Dehydrate in series of alcohol, transparent by xylene and seal with resinene.

Result

Sulfated Mucin	Blue
Non Sulfated Mucus	Uncolored
Nucleus	Light Red

Note

1. The fixative adopts 10% neutral formalin.
2. This method can be used to identify sulfated mucin and proteoglycan.
3. The dyeing time can be adjusted according to the experimental requirements.
4. The opened reagent shall be used up within 6 months after open, 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.