

## 软骨染色试剂盒（阿利新蓝法，pH2.5）

货号：G2542

规格：2×50mL

保存：2-8℃，避光保存，有效期1年。

### 产品组成：

名称	2×50mL	保存
试剂(A): Alcian 酸化液	50mL	室温
试剂(B): Alcian 染色液(pH2.5)	50mL	2-8℃, 避光

### 产品介绍：

阿利新蓝(Alcian)又称爱先蓝或阿尔辛蓝等，是一种类铜钛花青共轭染料，最初用于纺织纤维染色。这种阳离子染料与酸性基团结合，也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。pH 值为 2.5 时，组织内的羧基电离，带有一个负电荷，与阿利新蓝中的阳离子形成盐键，使带有羧基的酸性黏液物质(硫酸黏蛋白和唾液黏蛋白)染色。pH 值为 1.0 时，组织内的硫酸根电离，带有一个负电荷，与阿利新蓝中的阳离子形成盐键，使带有硫酸根的组织(如硫酸黏液物质)染色。

软骨染色试剂盒（阿利新蓝法，pH2.5）利用染液的不同 pH 值可区分粘液物质的类属，pH 为 1 时，羧基(COOH)不着色，硫酸基(OSO<sub>3</sub>H)着色，pH 为 2.5 时，羧基染色良好而硫酸粘液着色不佳，使硫酸黏蛋白和唾液黏蛋白着色。本试剂仅适用于科研领域，不适用于临床诊断。

### 自备材料：

系列乙醇、蒸馏水

### 操作步骤：（仅供参考）

- 1、常规脱钙，二甲苯脱蜡，通过梯度乙醇后，入蒸馏水再水化。
- 2、入Alcian酸化液浸泡3min。
- 3、入Alcian染色液(pH2.5)染色30min。
- 4、流水冲洗5min。
- 5、梯度乙醇脱水，二甲苯透明，中性树脂封片。

### 染色结果：

酸性黏液物质	蓝色
细胞核	淡蓝色

### 注意事项：

- 1、固定液采用10%中性福尔马林。
- 2、若要选择性鉴别硫酸黏蛋白和蛋白多糖，应使用pH值低(pH=1.0)的阿利新蓝，即调pH值为1.0。染色程序与pH=2.5的阿利新蓝操作相同，染色时间应相应延长。
- 3、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。
- 4、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 Cartilage Stain Kit, pH 2.5

**Cat:** G2542

**Size:** 2×50mL

**Storage:** 2-8°C, avoid light, valid for 1 year.

### Kit Components

Reagent	2×50mL	Storage
Reagent (A): Alcian Acidic Solution	50mL	RT
Reagent (B): Alcian Staining Solution(pH2.5)	50mL	2-8°C, avoid light

### Introduction

Alcian also known as 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 the central copper containing phthalocyanine ring and four isothioureia groups linked by thioether bond. The isothioureia group is moderately alkaline, making Alcian Blue with cation. When the pH value is 2.5, the carboxyl group in the tissue is ionized with a negative charge and forms a salt bond with the cation in Alcian Blue, which makes the acid mucus (sulfate mucin and salivary mucin) with carboxyl group stained. When the pH value is 1.0, the sulfate radical in the tissue is ionized with a negative charge, forming a salt bond with the cation in Alcian Blue, so that the tissue with sulfate radical (such as sulfuric acid slime) is stained.

Alcian Blue Cartilage Stain Kit, pH 2.5 can distinguish the genus of mucus by different pH value of staining solution. When pH value is 1, carboxyl group(COOH) is not dyed, and sulfuric acid group(OSO<sub>3</sub>H) is dyed. When pH value is 2.5, COOH is dyed well, while OSO<sub>3</sub>H is dyed bad, which makes mucin sulfate and mucin saliva stain. This reagent is only suitable for scientific research, not for clinical diagnosis or other purposes.

### Self Provided Materials

Series of ethanol, distilled water

### Protocols(for reference only)

1. Conventional decalcification, dewax to distilled water.
2. Soak in Alcian Acidic Solution for 3min.
3. Stain with Alcian Staining Solution(pH2.5) for 30min.
4. Rinse in running water for 5min.
5. Dehydrate in series of ethanol, transparent in xylene and seal with resinene.

### Result

Sulfated Mucin	Blue
Nucleus	Light Blue

### Note

1. The fixative adopts 10% neutral formalin.
2. To selectively identify sulfated mucins and proteoglycans, Alcian Blue with low pH value (pH=1.0) should be used, it is to adjust the pH value to 1.0. The dyeing procedure is the same as that of Alcian Blue with pH =2.5, and the dyeing time should be prolonged accordingly.
3. 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.
4. For your safety and health, please wear experimental clothes and disposable gloves.