

## Alcian Blue & Nuclear Fast Red Staining Kit, pH2.5

### Introduction

Alcian Blue is a cationic dye, soluble in water. Alcian Blue binds with the sulphur and carboxyl groups of the mucin depending on the pH, and stains these acid mucins and mucosubstances blue.

Nuclear Fast Red Staining Solution is an ideal counterstaining in tissue staining, which stains nuclei red.

Alcian Blue & Nuclear Fast Red Staining Kit, pH2.5 provides two staining solutions. The alcian blue stains mucins and mucocutaneous blue and the nuclei are stained to red when the counterstain nuclear fast red is used. This kit has been modified, and the samples don't need incubation in an acetic acid solution before alcian blue staining. The alcian blue staining solution in this kit can stain both sulphated and carboxylated acid mucopolysaccharides and glycoproteins with a pH of 2.5. At pH1.0, the alcian blue staining solution only stains sulphated acid mucopolysaccharides.

### Components and Storage

Components	K1188-100 T	K1188-500 T
Alcian Blue Staining Solution, pH2.5	10 mL	50 mL
Nuclear Fast Red Staining Solution	10 mL	50 mL

Store the solution at room temperature away from light. Stable for 1 year. The kit can be stored at 4°C or -20°C if not used for a long time.

### Protocol

#### 1. Sample pretreatment

##### 1) Paraffin section

- ① Soak the sections in the xylene 2 times (5-10 min/per time) to remove the wax
- ② Absolute ethanol treatment for 5 min
- ③ 90% ethanol treatment for 2 min
- ④ 80% ethanol treatment for 2 min
- ⑤ 70% ethanol treatment for 2 min

## 2) Cell smear

- ① Prepare the cell smear as usual and dry it naturally

## 2. Sample Staining

### 1) Paraffin section:

- ① Alcian Blue Staining Solution treatment for 1 h, rinse with distilled water 3 times (10 s/per time)
- ② Nuclear Fast Red Staining Solution treatment for 5-10 min, rinse with tap water 5 min

**\*Note:** The time of staining can be adjusted according to experiment needs.

- ③ Perform dehydration, clearing or sealing as usual and examine directly under the microscope

### 2) Cell smear:

- ① Alcian Blue Staining Solution treatment for 1 h, rinse with distilled water 3 times (10 s/per time)
- ② Nuclear Fast Red Staining Solution treatment for 5-10 min, rinse with tap water 5 min

**\*Note:** The time of staining can be adjusted according to experiment needs.

- ③ Dry the smear and examine it directly under the microscope

## 3. Staining result

Acidic mucosubstances	Blue
Proteoglycan and hyaluronic acid	Blue
Nuclei	Red
Cytoplasm	Pale pink

## Note

1. For the first time using this solution, it is recommended to take 1-2 samples for a preliminary test.
2. Please do not use the solution if it appears precipitate.
3. The time of nuclear fast red staining can be adjusted according to the experimental needs.
4. Nuclear fast red staining solution is colloid. If the solution occurs precipitate, heat the solution in the boiling water bath for 5-10 minutes and then use it as usual.
5. Nuclear fast red is soluble in water and ethanol. So the time for rinsing and dehydration should not be too long. And the mounting media should not have water or ethanol.
6. For your safety and health, please wear lab coats and gloves during the experiment.

7. For research use only. Not to be used in clinical diagnostic or clinical trials.



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