

Hyaluronic Acid Staining Solution

Cat. No.: H1518548 | Pack size: 2×50 mL | Storage: 2-8°C, protected from light; room temperature; -20°C

Overview

Alcian Blue, also known as Alcian Blue 8GX, is a macromolecular conjugated dye belonging to copper phthalocyanine dyes. It was originally used for dyeing textile fibers. This cationic dye binds to acidic groups; that is, Alcian Blue forms insoluble complexes with anionic groups in tissues, such as carboxyl and sulfate groups. Alcian Blue 8GX and 8GS are recommended for histological staining. The exact mechanism by which Alcian Blue stains carbohydrates is unclear. It is generally believed that the cationic isothiuronium groups bind to polyanions in tissues electrostatically, and it does not precipitate glycogen. Sulfate or carboxyl groups of chondroitin sulfate, dermatan sulfate, heparan sulfate, and hyaluronic acid ionize at pH 2.5, thus carrying a negative charge. This causes proteoglycans/hyaluronic acid in connective tissue and cartilage, as well as epithelial acid mucins (e.g., sialomucins and sulfomucins of the large intestine), to react with Alcian Blue at pH 2.5. Neutral mucins (e.g., those in the gastric mucosa and Brunner's glands) do not react with Alcian Blue.

Hyaluronic Acid Staining Solution uses hyaluronidase digestion combined with Alcian Blue staining. The principle is that hyaluronidase cleaves the glycosidic bonds in hyaluronic acid and chondroitin sulfate. Specimens are pretreated with hyaluronidase before Alcian Blue staining. Compared with untreated sections, if the treated sections show no staining, hyaluronic acid or chondroitin sulfate is present in the tissue. If the pretreatment has no effect, the tissue does not contain hyaluronic acid. Although lacking absolute specificity, a negative result after hyaluronidase treatment can rule out the presence of hyaluronic acid. This reagent is for research use only. Not for clinical diagnosis or other purposes.

Product Components and Storage Conditions

Cat. No.	Component	2×50 mL	Storage
H1518548A	HAase Solution	25 mL	-20°C. Store in the dark.
H1518548B	PB Buffer	25 mL	RT
H1518548C	Alcian Blue Stain	50 mL	2-8°C. Store in the dark.

Materials Required

- Deionized water, graded ethanol / xylene or eco-friendly dewaxing and clearing agent, neutral balsam

Protocol (For Reference Only)

1. Take 2 positive control slides and 2 test slides. Deparaffinize with xylene or dewaxing and clearing agent, rehydrate through graded ethanol, then place in deionized water.
2. Incubate 1 positive control slide and 1 test slide with HAase Solution at 37°C for 3 h. Incubate the other 1 positive control slide and 1 test slide with PB Buffer at 37°C for 3 h.
3. Rinse in running water for 5 min.
4. Stain in Alcian Blue Stain for 30 min, then rinse in running water for 5 min.
5. Dehydrate in graded ethanol, clear in xylene or dewaxing and clearing agent, and mount with neutral balsam.

Staining Results

Hyaluronic acid and/or chondroitin sulfate (without enzyme treatment): Blue

Hyaluronic acid and/or chondroitin sulfate (with enzyme treatment): Negative / No staining

Precautions

1. Positive control slides must be used to verify enzyme activity.
2. For your safety and health, wear a lab coat and disposable gloves during operation.

Specifications

Attribute	Value
Synonyms	Hyaluronic Acid Dyeing Liquid set
Specifications & Purity	BioReagent, Biological Stain, for microscopy
Stability And Storage	Each component has a shelf life of 1 year under corresponding storage conditions.
Storage Conditions	Store at 2-8°C, Protected from light, Room temperature, Store at -20°C

Attribute	Value
Shipped In	Wet ice This product requires cold chain shipping. Ground and other economy services are not available.
Grade	Biological Stain, BioReagent, for microscopy

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Limitations & Disclaimer

- For Research Use Only (RUO). Not for use in human or animal diagnostics, therapeutics, or in vivo applications. Not for food, cosmetic, or household use.
- This product is not a CE-marked in vitro diagnostic device under IVDR (EU) 2017/746 and is not an FDA-cleared device under 21 CFR. Use is restricted to verified businesses, institutions, and qualified professionals for research and development purposes.
- Where any kit component is classified as hazardous under CLP (EC) 1272/2008 or OSHA HCS (29 CFR 1910.1200), the product Safety Data Sheet (SDS) takes precedence over this document for handling, storage, and disposal information.
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