

ALCIAN BLUE 8 GX, C.I. 74240



IVD In vitro diagnostic medical device

Classification according to Regulation (EU) 2017/746 - **Class A** device

For staining acidic mucosubstances and acid mucins

Alcian Blue, Ingrain Blue 1, C.I. 74240

INSTRUCTIONS FOR USE

Basic UDI-DI	385889212HPC30707PDYETD		
EMDN code	W01030707		
REF	Catalog number	Mass	UDI-DI
CA8GX-P-5		5 g	03858890000511
CA8GX-P-10		10 g	03858888820411
CA8GX-P-25		25 g	03858888820428



Intended use and test principle

Histology, cytology, and other related scientific disciplines study the microscopic anatomy of tissues and cells. Proper staining is required to achieve good visualization of tissue and cellular structures. Alcian Blue 8GX dye is used for the demonstration of glycosaminoglycans in mucins, for the staining of amyloid and cysteine, and for the polychromatic staining of mast cells using the Alcian Blue–Safranin method. It is also used for the identification of bacterial species and the detection of bacterial capsules. The combination of PAS staining and Alcian Blue 8GX dye further facilitates the identification of acidic mucosubstances (glycosaminoglycans). In PAS staining, the material is treated with periodic acid and Schiff's reagent, resulting in the characteristic red staining of aldehydes.

Product description

- **ALCIAN BLUE 8 GX, C.I. 74240** - powder dye for preparing a solution for microscopic identification of acid mucopolysaccharides

Example of an acid mucin staining method using Alcian Blue 8GX powder dye

Additional reagents and materials that can be used in the staining procedure

- Fixatives, such as BioGnost's neutral buffered formaldehyde solutions: Formaldehyde NB 4%, Formaldehyde NB 10%
- Dehydration/rehydration agents such as BioGnost's alcohol solutions: Histanol 70, Histanol 80, Histanol 95, and Histanol 100
- Clearing agents, such as BioClear xylene or BioClear New, an aliphatic hydrocarbon-based xylene substitute
- Infiltration and embedding agents such as BioGnost's granulated paraffins BioWax 52/54, BioWax 56/58, BioWax Plus 56/58, BioWax Blue
- Microscopic slide covering agents and cover glass mountants such as BioGnost's BioMount, BioMount High, BioMount M, BioMount New, BioMount New Low, BioMount DPX, BioMount DPX High, BioMount DPX Low, BioMount DPX New, BioMount C, BioMount Aqua
- VitroGnost slides and coverslips for use in histopathology and cytology
- Immersion oils such as BioGnost's Immersion Oil, Immersion Oils types A, C, FF, 37, or Immersion Oil Tropical Grade
- Other components required for staining: Nuclear Fast Red (Kernechtrot) reagent and Sodium tetraborate, solution
- Acetic acid, glacial (concentrated)

Preparation of staining solution

- 1% Alcian Blue 8 GX staining solution (500 mL):
Add 3 mL of glacial acetic acid to 497 mL of distilled/demineralized water. Mix thoroughly. Add 5 g of Alcian Blue powder dye to the solution and stir until completely dissolved.

Preparation of histological sections for staining

- Fix (Formaldehyde NB 4%, Formaldehyde NB 10%) and process the tissue sample
- Embed the tissue in a paraffin block (BioWax 52/54, BioWax 56/58, BioWax Plus 56/58, BioWax Blue)
- Cut the paraffin block into 4-6 micron thin sections and mount on a VitroGnost microscope slide

Sample staining procedure

Pour the reagents into glass staining jars (Coplin, Hellendahl or Schifferdecker), return to original bottles after staining. Close tightly. Filter the reagents if necessary.

1.	Deparaffinize in xylene (BioClear) or xylene substitute (BioClear New)	3 exchanges, 10 min each
2.	Rehydrate in 100% alcohol (Histanol 100)	2 exchanges, 5 and 3 min
3.	Rehydrate in 95% alcohol (Histanol 95)	2 min
4.	Rehydrate in distilled/demineralized water	2 min
5.	Immerse into 1% Alcian Blue 8GX staining solution	45 min
6.	Tilt the section and drain off the 1% Alcian Blue 8GX dye solution	
7.	Without rinsing, immerse into Sodium tetraborate, solution	10 min
8.	Rinse in distilled/demineralized water	5 min
9.	Immerse into Nuclear Fast Red (Kernechtrot) reagent	5 min
10.	Rinse in distilled/demineralized water	2 min
11.	Dehydrate in 70% alcohol (Histanol 70)	5 dips
12.	Dehydrate in 95% alcohol (Histanol 95)	5 dips
13.	Dehydrate in 100% alcohol (Histanol 100)	2 min
14.	Clear in xylene (BioClear) or xylene substitute (BioClear New)	2 exchanges, 2 min each

Immediately after clearing, apply an appropriate BioMount covering/mounting medium. If BioClear xylene was used, use one of BioGnost's xylene-based mountants (BioMount, BioMount High, BioMount M, BioMount DPX, BioMount C, or universal BioMount New). If BioClear New xylene substitute was used, the appropriate mountant is BioMount New. Cover the section with a VitroGnost cover glass.

Result

Nuclei – dark blue to black
 Muscle fibers – green (red if the tissue is formalin-fixed)
 Basement membrane – fuchsia/pink
 Fibrin, erythrocytes – shades from yellow to red
 Connective fibers – blue

Limitations

This product is intended for professional laboratory use for diagnostic purposes only. Deviations from the method of preparing the dye solution or from the staining procedure may cause variations in the staining results shown in this Instructions for Use.

Sample preparation and diagnostics

Use only appropriate instruments for collecting and preparing the samples. Process the samples using modern technology and mark them clearly. It is necessary to follow the manufacturer's instructions for use. To avoid errors, staining and diagnosis can only be carried out by qualified personnel. Use a microscope that complies with medical diagnostic laboratory standards.

If a serious incident occurs during use or as a result of its use, please report it to the manufacturer and/or authorized representative and the competent authority.

Safety at work and environmental protection

Handle the product in accordance with occupational health and environmental protection guidelines. Used and expired solutions must be disposed of as special waste following national guidelines. Reagents used in this procedure can pose a danger to human health. The examined tissue samples are potentially infectious, therefore it is necessary to implement human health protection measures in accordance with good laboratory practice guidelines. It is mandatory to read and act according to the information and warning signs printed on the product label and in the Safety Data Sheet, which is available on request.

Storage, transport, stability, and shelf life

Upon receipt, store the product in a dry place and well-closed original packaging at a temperature of +15 °C to +25 °C. Do not freeze or expose to direct sunlight. After first opening, the product can be used until the specified expiry date, if stored properly. The production date and expiration date are printed on the product label.












References

1. Conn, J. (1977): *Biological Stains*, 9th ed., Baltimore: Williams and Wilkins Co.
2. Mowry, R.W. (1956): *Alcian blue techniques for the histochemical study of acidic carbohydrates*, Journal of Histochemistry and Cytochemistry, 4, 407.
3. Scott, J.E., Dorling, J. (1965): *Differential staining of acid glycosaminoglycans (mucopolysaccharides) by Alcian blue in salt solutions*, Histochemie, 5, 221-233.

Warnings and precautions regarding the materials contained in the product:

Not a dangerous substance or mixture according to Regulation (EC) no. 1272/2008.

CA8GX-IFU_ENV9, 13.05.2026., IŠP

 Manufacturer	 Batch code	 Consult instructions for use	 European conformity
 Date of manufacture	 Catalogue number	 Caution	
 Use-by date	 Temperature limit	 <i>In vitro</i> diagnostic medical device	 Unique device identifier

 **BioGnost Ltd.**
 Medjugorska 59, 10040 Zagreb, Croatia, EU, www.biognost.com

Version	Description / reason for change	Date
9	Revised acc. to Regulation (EU) 2017/746 - IVDR	13.05.2026.