

ALCIAN BLUE 1% PH 2.5 KIT

DESCRIPTION

The alcian blue staining procedure is used to identify and visualize acidic polysaccharides, proteoglycans, and mucins in tissue samples. Alcian blue binds strongly to negatively charged components, such as sulfate or carboxyl groups. When adjusted to pH 2.5, the stain binds to both sulfated and carbonylated mucopolysaccharides and glycoproteins. Nuclear fast red is used as a counterstain/background stain.

Kit Components

- 3301 Acetic Acid 3%
- 7022 Alcian Blue pH 2.5
- 3374 Nuclear Fast Red

Intended Use

Stains acid mucosubstances and acetic mucins.

Precautions

Refer to SDS for more information. Kit should be used by trained laboratory professionals and performed under a fume hood to minimize exposure.

Specimen Collection and Storage

Deparaffinized and re-hydrated 4–6-micron tissue sections on positively charged slides. Frozen sections can be used if fixed in formalin or another fixative prior to staining.²

Quality Control

Ethos Biosciences test each lot using appropriate tissue controls: small intestine or colon. Follow all recommended Quality Control procedures detailed within your laboratory handbook.

Interpretation of Test

- Nuclei- dark pink
- Cytoplasm- pale pink
- Acid mucin / mucosubstances- blue

Limitations

1. The strength of the bonds is thought to be correlated with the deepness of the blue dye. To create more robust staining, one should increase the incubation time in the Alcian blue.³
2. Alcian blue can be adjusted to pH 1.0 to demonstrate only sulfated acid mucopolysaccharides and glycoproteins. A 0.1N hydrochloric acid can be used to bring the pH down.³
3. Rinse well after counterstain. If it is not rinsed well, the slide can become cloudy during dehydration step.
4. Do NOT filter the counterstain.

References

Carson, F. L. (2001). *Histotechnology: a self-instructional text* (2. ed., [Reprint]). ASCP Press.

Disbrey, B. D., & Rack, J. H. (1970). *Histological laboratory methods*. Livingstone.

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Sheehan D, Hrapchak B. Theory and practice of Histotechnology, 2nd Ed, 1980, pp 163,173-174, Battelle Press, Ohio

WebPath. Alcian Blue pH 2.5, Surgical Pathology Staining Manual.
<http://www-medlib.med.utah.edu/WebPath/webpath.html>.

PROCEDURE						
#	ACTION	SOLUTION	HEAT	TIME		DETAILS
				MIN	SEC	
1	DEPARAFFINIZE	XYLENE OR SUB, 2 CHANGES	–	5	–	5 MINUTES EACH CHANGE OR AS REQUIRED
2	HYDRATE	GRADED ALCOHOLS	–	1	–	1 MINUTE EACH CHANGE OR 10 DIPS PER GRADED ALCOHOL
3	RINSE	RUNNING DI WATER	–	1	–	
4	IMMERSE	ACETIC ACID 3%	–	3	–	
5	IMMERSE	ALCIAN BLUE	–	30	–	OR 15 MIN AT 37°C
6*	RINSE	ACETIC ACID*	–	10-15	–	CAN BE ADDED TO REMOVE EXCESS DYE
7	RINSE	RUNNING TAP WATER	–	5-10	–	RINSE WITH DI WATER
8	IMMERSE	NUCLEAR FAST RED	–	5	–	
9	RINSE	DI WATER	–	–	–	RINSE WELL
10	DEHYDRATE	GRADED ALCOHOLS	–	–	–	1 MINUTE EACH CHANGE OR 10 DIPS PER GRADED ALCOHOL
11	CLEAR	XYLENE OR SUB, 2 CHANGES	–	5	–	5 MINUTES EACH CHANGE OR AS REQUIRED
12	COVERSLIP	RESINOUS MEDIUM	–	–	–	

PRODUCT INFORMATION

CAT. #	DESCRIPTION
7576-08	Alcian Blue 1% pH 2.5 Stain Kit 8oz
7576-16	Alcian Blue 1% pH 2.5 Stain Kit 16oz
3301	Alcian Blue pH 2.5
3374	Nuclear Fast Red
7022	Alcian Blue pH 2.5

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