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Part 4020
Revised January 2020

Alcian Blue pH 2.5, Umbilical Cord Control Slides – Technical Memo

CONTROL SLIDES:

	Part 4020A	**Part 4020B**
	10 Slide/Set	98 Slide/Set

PRODUCT SPECIFICATIONS:
Tissue: Positive staining umbilical cord.
Fixation: Formalin 10%, Phosphate Buffered (Part 1090).
Section/Glass: Paraffin sections cut at 4 microns on Superfrost™ Plus slides.
Quality Control Stain: Alcian Blue pH 2.5 quality control stained slide(s) included.
Reactivity: Guaranteed product specific reactivity for one year from date of receipt. Revalidate after one year to verify continued reactivity.
Storage: 15-30°C in a light deprived and humidity controlled environment.
Intended Use: To verify histological techniques and reagent reactivity.

Before using unstained control slides, review the enclosed stained slide(s) to ensure that this tissue source is acceptable for testing needs.

CONTROL SLIDE VALIDATION:

With Alcian Blue 1%, pH 2.5 Stain Kit:	**Part 9102A/B**	**Individual Stain Solution**
Solution A: Acetic Acid 3%, Aqueous	250/500 ml	Part 10017
Solution B: Alcian Blue Stain 1%, pH 2.5 Aqueous	250/500 ml	Part 1003
Solution C: Nuclear Fast Red Stain, Kernechtrot	250/500 ml	Part 1255

APPLICATION:

Newcomer Supply Alcian Blue pH 2.5, Umbilical Cord Control Slides are for the positive histochemical staining of acid epithelial mucins (sialomucin, sulfomucin) as well as stromal (mesenchymal) mucin.

NEWCOMER SUPPLY VALIDATION PROCEDURE:

1. Heat dry sections in oven according to your laboratory protocol.
2. Deparaffinize sections thoroughly in three changes of xylene, 3 minutes each. Hydrate through two changes each of 100% and 95% ethyl alcohols, 10 dips each. Wash well with distilled water.
    a. *See Procedure Notes #1 and #2.*
3. Place slides in Solution A: Acetic Acid 3%, Aqueous for 3 minutes.
4. Move slides directly into Solution B: Alcian Blue Stain 1%, pH 2.5 Aqueous. Stain for 30 minutes at room temperature or for 15 minutes in a 37°C water bath.
5. Wash in running tap water for 10 minutes; rinse in distilled water.
    a. *See Procedure Note #3.*
6. Counterstain in Solution C: Nuclear Fast Red Stain, Kernechtrot for 5 minutes.
    a. *Shake solution well before use; do not filter.*
7. Rinse well in distilled water.
    a. *See Procedure Note #4*
8. Dehydrate quickly through two changes of 95% ethyl alcohol and two changes of 100% ethyl alcohol. Clear in three xylene changes, 10 dips each; coverslip with compatible mounting medium.

RESULTS:

Acid epithelial mucins	Blue
Stromal (mesenchymal) mucin	Blue
Nuclei	Pink-red
Cytoplasm	Pale pink

PROCEDURE NOTES:

1. Drain slides after each step to prevent solution carry over.
2. Do not allow sections to dry out at any point during procedure.
3. A brief dip in Solution A: Acetic Acid 3%, Aqueous from Step #3 can be added before water rinses to remove excess Alcian Blue Solution if needed.
4. Wash well after Nuclear Fast Red Stain, Kernechtrot to avoid cloudiness in dehydration steps.
5. If using a xylene substitute, closely follow the manufacturer's recommendations for deparaffinization and clearing steps.

REFERENCES:

1. Carson, Freida L., and Christa Hladik. *Histotechnology: A Self-Instructional Text*. 3rd ed. Chicago, Ill.: American Society of Clinical Pathologists, 2009. 145-148.
2. Sheehan, Dezna C., and Barbara B. Hrapchak. *Theory and Practice of Histotechnology*. 2nd ed. St. Louis: Mosby, 1980. 172-175.
3. Modifications developed by Newcomer Supply Laboratory.