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Part 3830
Revised October 2017

Uro-2™ (CK20 + p53), Multi-Tissue Control Slides – Technical Memo

CONTROL SLIDES:

Part 3830A	**Part 3830B**
10 Slide/Set	98 Slide/Set

Uro-2™ (CK20 + p53), Multi-Tissue Control Slides contain sections of CK20 positive staining colon, p53 positive staining colon and negative staining lung.

PRODUCT DESCRIPTION:

The enclosed positive control slides are intended to be used to verify histological techniques and reagent reactivity. These slides are to be used for the qualitative purpose of determining positive or negative results, and are not intended to be used for any quantitative purpose. The first serial section within the control box is stained and provided for your reference. ***Before using the unstained slides, review the enclosed stained slide with your pathologist to ensure that this tissue source is acceptable. Newcomer Supply will not accept a return with missing slides in the series. Newcomer Supply guarantees reactivity of these control slides for six months from the date of receipt. Revalidate after six months to verify continued reactivity. Store at 15-30°C in a light deprived and humidity controlled environment.***

These positive control slides were produced from human surgical or autopsy tissues under carefully controlled conditions. Reasonable measures are used to deliver quality control slides that are as consistent as possible. However, characteristics of quality control slides may be dissimilar due to variations in the reagents, stains, techniques, laboratory conditions, and tissue sources used. Newcomer Supply Laboratory uses a manual method of performing quality control procedures, specifically avoiding automation, in order to provide reactive control slides for even less aggressive methods of staining that our customers may be using.

APPLICATION:

Newcomer Supply Uro-2™ (CK20 + p53), Multi-Tissue Control Slides provide a useful combination of markers CK20 and p53, helpful in differentiating urothelium with reactive atypia from urothelial carcinoma *in situ* (CIS).

METHOD:

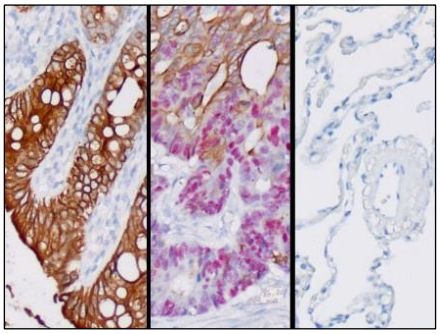
Fixation: Formalin 10%, Phosphate Buffered (Part 1090)
Technique: Paraffin sections cut at 4 microns on Superfrost® Plus

NEWCOMER SUPPLY VALIDATION PROCEDURE:

1. 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 Note #1.*
2. Proceed, if necessary, with an epitope/antigen retrieval technique approved for use in your laboratory.
3. Rinse in distilled water; tap off excess water.
4. Circle sections with Pap Pen Liquid Blocker (Part 6505, 6506 or 6507) to reduce reagent usage and ensure tissue coverage.
5. Block endogenous peroxidase with freshly made 3% Hydrogen Peroxide. Incubate for 5 minutes.
    a. *See Procedure Note #2.*
6. Wash slides gently in distilled water. Rinse in two changes of Tris Buffered Saline.
    a. *See Procedure Note #3.*
7. Tap off excess buffer; apply Uro-2™ (CK20 + p53) primary antibody. Incubate at room temperature for 30 minutes.
8. Rinse slides in two changes of buffer.
9. Tap off excess buffer; apply MACH 2™ Polymer. Incubate for 30 minutes.
10. Rinse slides in two changes of buffer.
11. Prepare required quantity of DAB substrate/chromogen.
12. Tap off excess buffer; apply DAB. Incubate for 5 minutes.
13. Rinse slides in two changes of buffer.
14. Prepare required quantity of Vulcan Fast Red Chromogen.
15. Tap off excess buffer; apply Vulcan Fast Red. Incubate for 10 minutes.
16. Rinse slides in four changes of distilled water.
17. Counterstain lightly with Hematoxylin Stain, Gill I (Part 1180) for 5 minutes.
18. Rinse slides in warm tap water to blue sections.
19. Dehydrate in two changes each of 95% and 100% ethyl alcohol. Clear in three changes of xylene, 10 dips each; coverslip with compatible mounting medium.

RESULTS:

CK20 positive expression	Brown cytoplasmic staining
p53 positive expression	Red nuclear staining
Lung	Negative



PROCEDURE NOTES:

1. Do not allow sections to dry out at any point during staining procedure.
2. Dilute sufficient Hydrogen Peroxide 30%, Aqueous (Part 1206) with distilled water to a 3% (1/10) solution prior to use.
3. Dilute sufficient Tris Buffered Saline 0.05M, pH 7.6, 10X (Part 140304) with distilled water to a 1/10 solution prior to use for all buffer rinses in this procedure.
4. Biocare Uro-2™ (CK20 + p53) is the pre-diluted primary antibody used (Ks20.8 + EP9).
5. Biocare MACH 2™ Double Stain 2 Polymer Detection Kit (MRCT525) provides the polymer solution used.
6. Cell Marque DAB Substrate Kit (957D) is the chromogen used.
7. Biocare Vulcan Fast Red Chromogen Kit 2 (FR805) is the second chromogen used.
8. If using a xylene substitute, closely follow the manufacturer's recommendations for deparaffinization and clearing steps.

REFERENCES:

1. Biocare Uro-2™ (CK20 + p53) Antibody datasheet.
2. Biocare MACH 2™ Double Stain 2 Polymer Detection Kit datasheet.
3. Cell Marque DAB Substrate Kit datasheet.
4. Biocare Vulcan Fast Red Chromogen Kit 2 datasheet.
5. Modifications developed by Newcomer Supply Laboratory.

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