CYTODIAGNOSTICS

PRODUCT DATA SHEET

Silver Enhancer Kit for Microscopy

Catalog No. SR-01-01 Size: 50ml

Description

Kit for silver enhancement of gold, silver and nanourchin conjugate labeled samples for light microscopy applications. Using this straightforward kit, sensitivity in the picogram range can be achieved in 5-8 minute staining time while maintaining a low background.

Amplification of the gold, silver and nanourchin nanoparticle label is a result of the deposition of silver on the nanoparticle surface during the reaction and allowing detection of the label using a standard light microscope after 5-8 minute staining time.

Storage

This product should be stored at 2-8°C and not exposed to extreme heat or light. DO NOT FREEZE. The product is stable for 4 months when stored under these conditions.

Product Safety and Handling

This product is for R&D use only, not for drug, household, or other uses. Please review the material safety datasheet (MSDS) available online for proper safety and handling procedures.

Suggested Procedure

1. If using paraffin embedded tissue section these must first be deparaffinized using an appropriate protocol.

2. Apply the nanoparticles conjugated primary antibody or primary antibody followed by a secondary nanoparticle conjugate according to protocol.

3. Wash according to protocol.

4. Mix equal volumes of Solution A and Solution B into a plastic tube. The recommended amount per slide is 500 µl – 1.0 ml/slide.

5. Incubate the slide with the prepared silver enhancer solution.

NOTE: The incubation time may need to be optimized depending on the assay system.

When a brownish color is seen, just before the color turns black, the reaction should be stopped.

6. When suitable color intensity is observed, stop the reaction by rinsing the slide in deionized water using a squirt bottle three times for 5 minutes each.

NOTE: Direct the stream of water on the slide and not the tissue.

7. Counterstain, if desired, with Eosin, or other appropriate counterstain for 30-60 seconds.

8. Rinse with deionized water for 1 minute.

9. Dehydrate through graded ethanol for 3 minutes in 20%, 40%, 80% and 100% EtOH.

NOTE: Floating sections or whole mounts may be fixed to slides by drying under low heat followed by a 1 minute rinse in 95% ethanol.

10. Perform two washes by placing the slide in xylene or a xylene substitute, for 1 minute each.

11. Air-dry thoroughly.

12. Mount slides in an organic mounting media.

Ordering Information

For ordering call 866-344-3954 or visit us online.

Canada, Europe, Asia, Pacific and Africa
919 Fraser Drive, Unit 11, Burlington, ON Canada L7L 4X8
Tel: 866-344-3954 Fax: 289-204-9100
www.cytodiagnostics.com

United States, Mexico, South and Central America
5867 South Garnett Road, Tulsa, Oklahoma 74146 USA
Tel: 866-344-3954 Fax: 289-204-9100
www.cytodiagnostics-us.com

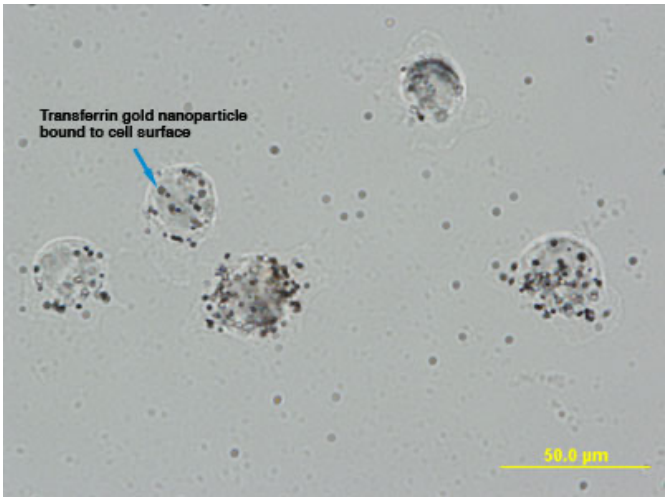

Figure 1. *Transferrin conjugated gold nanoparticles bound to A549 cells. Enhanced using Cytodiagnostics Silver Enhancement Kit for Microscopy for detection with light microscopy*

Troubleshooting

Problem	Possible Cause	Corrective Measure
Excessive Development and/or Background	Silver Enhancer Incubation time too long.	Shorten/optimize Silver Enhancer incubation time.
Floating Precipitate	- Excess antibody; reaction too fast. - Silver incubation time too long.	- Dilute primary antibody and/or nanoparticle conjugate. - Optimize Silver Enhancer time.
Purple or other colour	Excess counterstain.	Shorten counterstain incubation time.

References

1. Danscher, G., Hacker, G., et. l., J. Histotechnology, 16(3):201-207, 1993.

2. Hacker, G., Grimelius, L., et. l., J. Histotechnology, 11(4):213-221, 1988.

3. Holgate, C., Jackson, P., Cowen, P., and Bird, C., J. Histo/Cytochemistry, 31(7):938-944, 1983.

4. Danscher, G., J. Histochemistry, 71:1-16, 1981

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