



Instructions For Use

AMY-IFU

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Amyloid Stain Kit (Congo Red)

Description and Principle

The Amyloid Stain Kit (Congo Red) is intended for use in the histological visualization of amyloid in tissue sections. Examination under a polarizing microscope results in green birefringence of amyloid.

Congo Red binds amyloid by hydrogen bonds with amyloid fibers in a highly oriented linear manner. Linear bound amyloid will exhibit green birefringence under polarized light.

Expected Results

Amyloid:	Red to Pink
Erythrocytes:	Light Orange
Eosinophil Granules:	Orange to Red
Nuclei:	Blue

Kit Contents

Kit Contents	Storage
1. Congo Red Solution	18-25°C
2. Hematoxylin	18-25°C
3. Bluing Reagent	18-25°C

Suggested Controls *(not provided)*

Freshly cut FFPE sections containing amyloid.

It has been reported that birefringence of pre-cut sections weakens over time.

Cut sections 8-10 microns for optimal visualization of amyloid deposit birefringence.

Uses/Limitations

For In-Vitro Diagnostic use only.

Do not use if reagents become cloudy or precipitate

Do not use past expiration date.

Use caution when handling reagents.

Non-Sterile

Intended for FFPE sections cut at 5-10µm.

This procedure has not been optimized for frozen sections.

Frozen sections may require protocol modification.

Storage

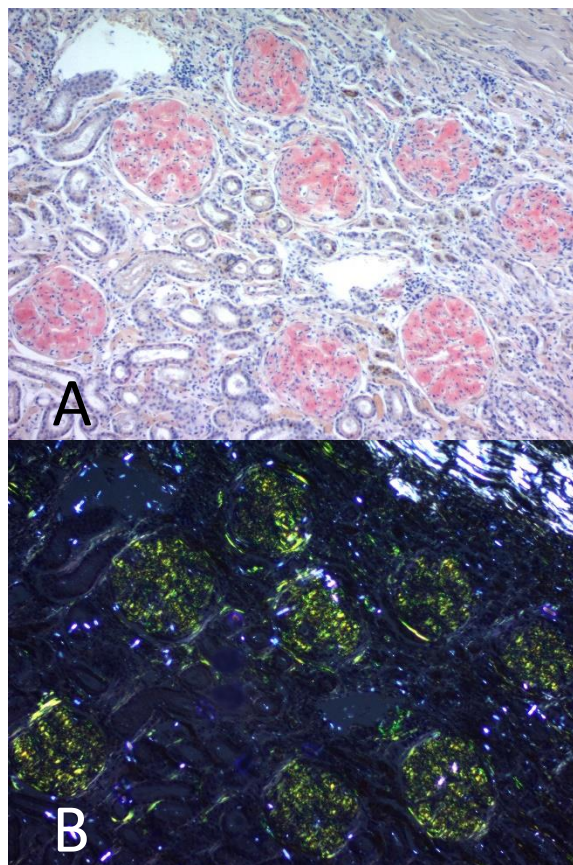
Store kit and all components at room temperature (18-25°C).

Safety and Precautions

Please see current Safety Data Sheets (SDS) for this product and components GHS classification, pictograms, and full hazard/precautionary statements.

Procedure

1. Deparaffinize sections and hydrate to distilled water.
2. Stain slide with Hematoxylin for 5 minutes.
3. Rinse slide in tap water.
4. Incubate slide in Bluing Reagent for 30 seconds.
5. Rinse slide in distilled water.
6. Briefly rinse slide in absolute alcohol for 3-5 seconds.



Amyloidosis in Canine Kidney demonstrated with Congo Red and viewed under A) Brightfield, and B) Polarized Light

7. Pour Congo Red Solution into a staining jar and place slide(s) in for 20 minutes. Ensure there is enough stain to completely cover tissue. Staining in smaller volumes of Congo Red Solution by pipetting or pouring on horizontal slides may cause non-specific staining.

8. Rinse excess stain off slide with absolute alcohol.

9. Dehydrate slide in absolute alcohol for another 30 seconds.

10. Clear and mount in synthetic resin.

References

1. Nakata, R., Nakamura, Y., Hosomi, S. et al. Slco2a1 deficiency exacerbates experimental colitis via inflammasome activation in macrophages: a possible mechanism of chronic enteropathy associated with SLCO2A1 gene. *Sci Rep* 10, 4883 (2020). <https://doi.org/10.1038/s41598-020-61775-9>
2. Chang, C.-W.; Lee, H.-C.; Li, L.-H.; Chiang Chiau, J.-S.; Wang, T.-E.; Chuang, W.-H.; Chen, M.-J.; Wang, H.-Y.; Shih, S.-C.; Liu, C.-Y.; Tsai, T.-H.; Chen, Y.-J. Fecal Microbiota Transplantation Prevents Intestinal Injury, Upregulation of Toll-Like Receptors, and 5-Fluorouracil/Oxaliplatin-Induced Toxicity in Colorectal Cancer. *Int. J. Mol. Sci.* 2020, 21, 386. <https://doi.org/10.3390/ijms21020386>
3. Chang, Ching-Wei, et al. "Lactobacillus casei variety rhamnosus probiotic preventively attenuates 5-fluorouracil/oxaliplatin-induced intestinal injury in a syngeneic colorectal cancer model." *Frontiers in Microbiology* 9 (2018): 983. <https://doi.org/10.3389/fmicb.2018.00983>
4. Puchtler, H, et al: On the binding of Congo Red amyloid. *J. Histochem. Cytochem.* Vol. 10: pages 355-363, 1962.
5. Eastwood, H. & Cole, K.R., Staining of amyloid in buffered Congo Red in 50% ethanol. *Stain Technology.* Vol. 46: pages 208-209, 1971.
6. Carson, F.L., *Histotechnology; A Self-Instructional Text*, 2nd Edition. ASCP Press, Chicago, IL. Pages 117-121, 1996.
7. Churukian, C., Improved Puchtler's Congo Red method. *J. of Histotechnology.* Vol. 23: pages 139-141, 2000.



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