

Instructions For Use AST-IFU

205 South 600 West Logan, Utah 84323, U.S.A. - Tel. (800) 729-8350 - Tel. (435) 755-9848 - Fax (435) 755-0015 - www.scytek.com Rev. 2, 10/31/2024

Astra Blue Solution

Description and Principle

Astra Blue Solution is designed to stain mast cells bright blue. This reagent can be used in combination with various counterstains to provide contrast.

Expected Results

Mast Cells: Blue Eosinophils: Red Nuclei: Blue

Kit Contents (Cat# CEM-1)	Storage
Additional Kit Reagents Sold Separately	
1. Astra Blue Solution	18-25°C
2. Vital New Red Solution	18-25°C
3. Hematoxylin, Mayer's (Lillie's Mod.)	18-25°C

Suggested Controls (not provided)

Any well fixed paraffin embedded or frozen tissue section cut 3-6 microns.

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 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 if necessary and hydrate to distilled water.

- 2. Stain tissue section with Astra Blue Solution for 1-3 minutes.
- 3. Rinse quickly in 2 changes of distilled water.

4. Stain tissue section with Vital New Red Solution for 30 minutes with frequent agitation.

5. Rinse quickly in 2 changes of distilled water.

 $\ensuremath{\mathsf{6.}}$ Counterstain in Hematoxylin, Mayer's (Lillie's Modification) for 15-30 seconds.

- 7. Rinse slide in running tap water for 2 minutes followed by distilled water.
- 8. Dehydrate quickly through 3 changes of absolute alcohol.

9. Clear, and mount in synthetic resin.



Dog mast cell tumor. Mast cell granules metachromatically stain bright blue.

References

1. Zhao, J., Jia, S., Xie, P. et al. Knockdown of sodium channel Nax reduces dermatitis symptoms in rabbit skin. Lab Invest 100, 751–761 (2020). https://doi.org/10.1038/s41374-020-0371-1

 Miyake, Shiro, Daisuke Irikura, and Tomomi Yamasaki. "Detection of Mast Cells Expressing c-Kit Using Antibody Covalently Bound to Gelatin Elongated from Surface of Immunosensor Based on Surface Plasmon Resonance." Analytical Sciences 35.7 (2019): 811-813.

3. Zhao J, Xie P, Galiano RD, Qi S, Mao R, Mustoe TA, Hong SJ. Imiquimod-induced skin inflammation is relieved by knockdown of sodium channel Nax. Experimental dermatology. 2019 Mar 23.

4. Yamada, Kiyoko, et al. "Topical Glucose Induces Claudin-1 and Filaggrin Expression in a Mouse Model of Atopic Dermatitis and in Keratinocyte Culture, Exerting Anti-inflammatory Effects by Repairing Skin Barrier Function." Acta Dermato-Venereologica 98.1 (2018).

5. R.-S. Chang, S.-D. Wang, Y.-C. Wang, L.-J. Lin, S.-T. Kao, and J.-Y. Wang, "Xiao-Qing-Long-Tang shows preventive effect of asthma in an allergic asthma mouse model through neurotrophin regulation," BMC Complementary and Alternative Medicine, vol. 13, no. 1, p. 220, Sep. 2013.

 S. Kao, "Soluble toll-like receptor 4 reversed attenuating effect of Chinese herbal Xiao-Qing-Long-Tang on allergen induced nerve growth factor and thymic stromal lymphopoietin," Experimental and Therapeutic Medicine, Sep. 2013.

7. Kermanizadeh, P., et al. A differential staining method for mast cells and eosinophils in murine intestine, liver and spleen. Parasitology Today, 1995, May; 11(5): pages 194-196.

 Ball, M.T., Hay, J.: Simultaneous Demonstration of Eosinophils, Granulocytes, and Mast Cell in Tissue Sections. Annals of Tropical Medicine and Parasitology., 84: pages 195-196, 1990.

9. Strobel, S., et al. Human intestinal mucosal mast cells: evaluation of fixation and staining techniques. Journal of Clinical Pathology, 1981; 34: pages 851-858.





Emergo Europe Westervoortsedijk 60 6827 AT Arnhem,The Netherlands