

Jan 03, 2025

Yale SenNet Human TMC - H&E staining following Phenocycler-Fusion Imaging



Forked from [Yale Murine TMC - H&E staining following Phenocycler-Fusion Imaging](#)

DOI

dx.doi.org/10.17504/protocols.io.5jyl8d6j9g2w/v1

Archibald Enniful¹, Negin Farzad¹, Jungmin Nam¹, Yale Pathology Tissue Services¹, Rong Fan¹

¹Yale University

Fan Lab Yale



Archibald Enniful

Yale University

Create & collaborate more with a free account

Edit and publish protocols, collaborate in communities, share insights through comments, and track progress with run records.

Create free account

OPEN  ACCESS



DOI: <https://dx.doi.org/10.17504/protocols.io.5jyl8d6j9g2w/v1>

Protocol Citation: Archibald Enniful, Negin Farzad, Jungmin Nam, Yale Pathology Tissue Services, Rong Fan 2025. Yale SenNet Human TMC - H&E staining following Phenocycler-Fusion Imaging. **protocols.io**

<https://dx.doi.org/10.17504/protocols.io.5jyl8d6j9g2w/v1>



License: This is an open access protocol distributed under the terms of the **Creative Commons Attribution License**, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited

Protocol status: Working

We use this protocol and it's working

Created: January 03, 2025

Last Modified: January 03, 2025

Protocol Integer ID: 117628

Keywords: phenocycler-fusion, codex, h&e, steps from yale pathology tissue service, flow cell, yale pathology tissue service, theremoval of the flow cell, staining step, fusion imaging this protocol, fusion imaging, following phenocycler, yale sennet human tmc, tissue section, phenocycler

Funders Acknowledgements:

Rong Fan

Grant ID: 1U54AG076043-01

Abstract

This protocol was adapted from (Yale Murine TMC - H&E staining following Phenocycler-Fusion Imaging)

DOI: dx.doi.org/10.17504/protocols.io.ewov19zjklr2/v1

Flow cell removal after Phenocycler-Fusion imaging and following H&E staining steps from Yale Pathology Tissue Services (YPTS). For FFPE samples, the tissue section is deparaffinized and rehydrated during the preprocessing steps for CODEX, hence these steps do not need to be repeated following theremoval of the flow cell

Troubleshooting



Removing flow cell following CODEX imaging

- 1 Remove slides from storage buffer.
- 2 Immerse slides to xylene or HistoClear overnight. However, an incubation of 20 minutes should suffice. 10m
- 3 Separate flow cell from the slide using a razorblades.
- 4 Rinse the tissue sample with DI water using at least 1L of DI water to ensure thorough rinsing.
- 5 Next, wash the tissue sample slide in 1x PhenoCycler™ Buffer without additive, 3 × 10 minutes.
- 6 If you are not performing H&E immediately, transfer the tissue sample slide(s) to the PhenoCycler Storage buffer for storage.

Hematoxylin and eosin staining

11m 30s

- 7 Stain with hematoxylin for 5 min. 5m
- 8 Rinse with water.
- 9 Clarifier for 30 seconds. 30s
- 10 Rinse with water.
- 11 Bluing for 1 min. 1m
- 12 Rinse with water.



13 Stain with eosin 5 min.

5m

14 Immerse slides in graded ethanol and clear slide in xylene.

15 Add coverslip with resin mounting medium.

Acknowledgements

Entire Yale SenNet TMC as well as the Yale Pathology Tissue Services