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Morphology markers still useable 21 days after staining

Figure 4 . A) Images of Daudi cell line over 21 days. Morphology markers are as follows: Syto13 (blue), PanCK (green), CD45 (yellow), and CD68 (red). B) Average signal-to-noise ratio (SNR) for each CPA slide each day for morphology markers. The dashed line ($y=3$) denotes the minimum threshold for SNR for segmentation. Error bars are \pm standard deviation.

Conclusions

- Sectioned slides may be stored for up to 15 weeks without seeing a reduction in gene counts
- Block ages up to 11 years old did not influence number of genes detected
- Storage temperature did not affect gene expression data - sectioned slides may be stored at either 4°C or RT
- Slides may be bulk prepared with probes and morphology markers and stored for up to 21 days in 2xSSC without seeing a decrease in gene expression data
- Nuclei counting algorithms and segmentation algorithms remained functional 21 days after staining.
- Taken together with an efficient end-to-end workflow (see AGBT 2023 poster 127), increased throughput of 100+ slides per month is possible with bulk preparation of tissue sectioning and slide preparation.

