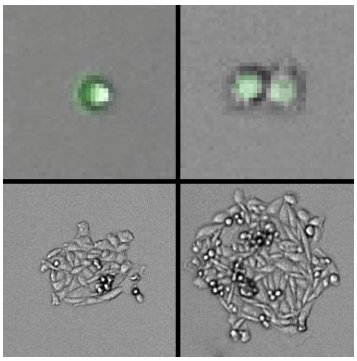
FASCC – Fluorescence Activated Single Cell Cloning



Short Note
SN-B123-XVII-04

Your Advantage

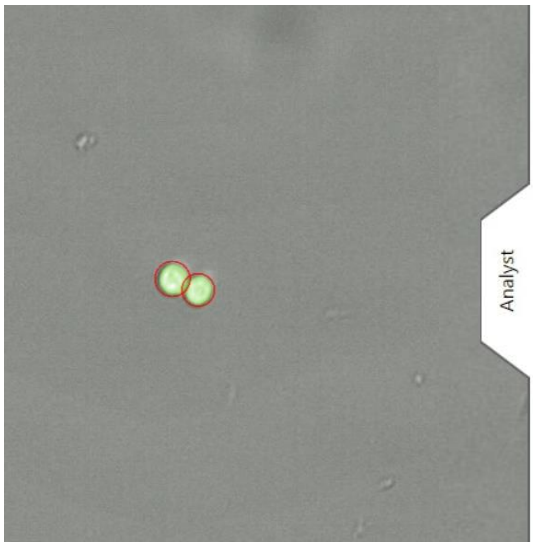
FDA requires more and more the image based proof of the monoclonality of your cell line. Methods have been established by using non-toxic fluorescent dyes, e.g. CellTracker® or Calcein-AM, to identify your potential clone from day one of seeding, to expedite the throughput by omitting subsequent colony monitoring. It has been shown that a resolution of 2 µm or worse (i.e. 4x magnification) might not separate two adjacent cells (doublets). Therefore a higher resolution is required, which takes a much longer scanning time for your sample carrier.
With SYNENTEC's NanoView in FASCC we combine high resolution imaging with fast pre-scanning to resolve your potential clones for an unambiguous documentation of your monoclonality without compromising throughput.

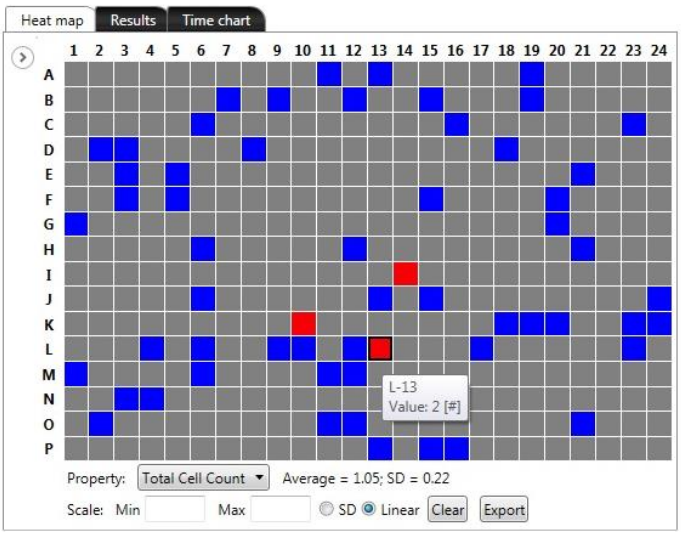
Read-Out Data Pre-Scan

Total Number of Cells	*Total Number of cells found* ***in a well*** *(which is set as a filter selection for NanoView)*
Total Number of Cells in Fluo Cluster	*Number of cells resolved in a cluster using fluorescence signal*

Read-Out Data NanoView-Scan

Total Number of Cells	*Total Number of cells found* ***in a well for a potential single clone***
Total Number of Cells Cluster Fluo	*Number of cells resolved in a cluster using fluorescence signal*
Total Number of Cells in Cluster BF	*Number of cells resolved in a cluster using brightfield signal*

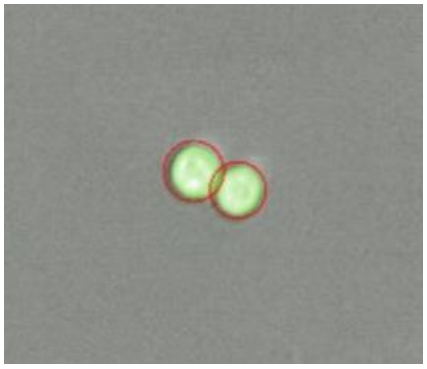




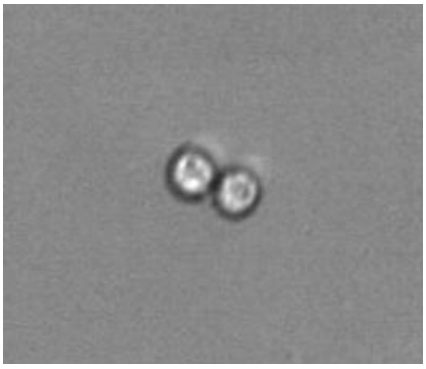
NanoView total cell count result overview

Examles of Doublet Identification and Monoclonality

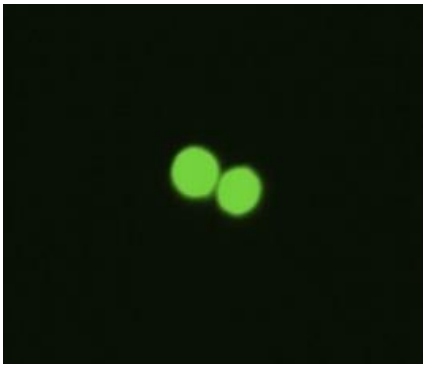
This example shows two cases where the NanoView mode resolved the doublets by using fluorescence and brightfield images.



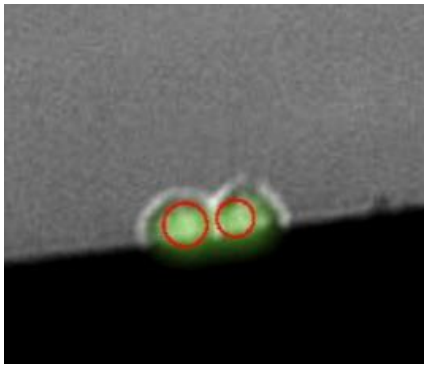
Overlay image with the brightfield and fluorescence channel and detection

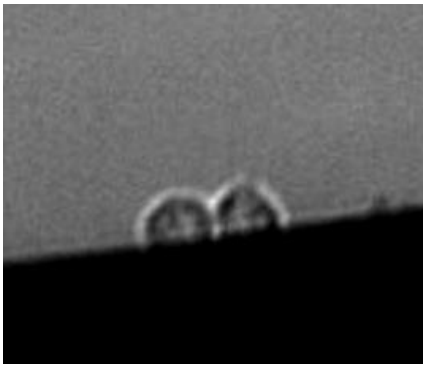


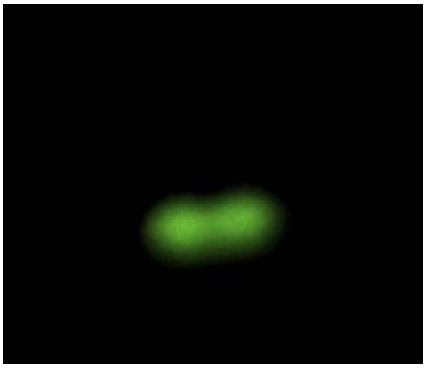
brightfield channel



fluorescence channel







SYNENTEC GmbH, Otto-Hahn-Str. 9a, 25337 Elmshorn, Germany
www.synentec.com, info@synentec.com