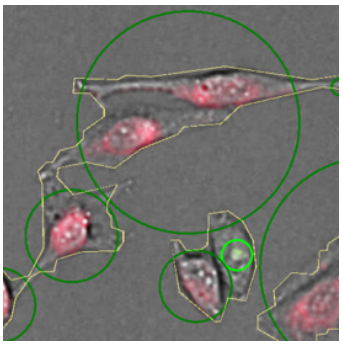
Cell Confluence (Dots 2F)

GENERAL PURPOSE

The Cell Confluence (Dots 2F) analysis algorithm can be used in an end point assay or in live cell imaging, where a confluent cell layer is analyzed in a brightfield image and two other event types in two further fluorescence images. These additional events (e.g. antibody stained organelles) are counted, if they occur, and the results are calculated with respect to the cell confluence area.



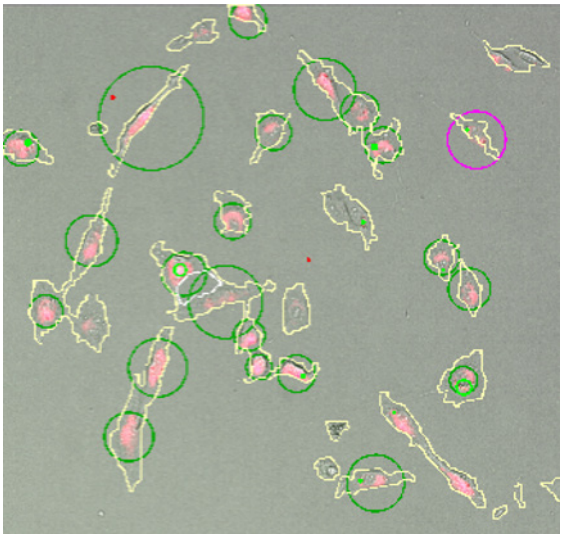
RESULT TABLE

Cell Area BF	Area covered with cells in the brightfield image
Cell Confluence BF	Percentage ratio of the cell area detected in the brightfield image with respect to the whole evaluated area
Cell Area Count BF	Number of isolated cell areas in the brightfield image
Cell Area Fluo 1	Area covered with cells or sub parts of cells in the first fluorescence image
Cell Area Count Fluo 1	Number of isolated cell areas in the first fluorescence image
Fluo 1 Objects on BF Area	Number of distinct cell areas in the first fluorescence image that overlap cell areas in the brightfield image
Cell Area Fluo 2	Area covered with cells or sub parts of cells in the second fluorescence image
Cell Area Count Fluo 2	Number of isolated cell areas in the second fluorescence image
Fluo 2 Objects on BF Area	Number of distinct cell areas in the second fluorescence image that overlap cell areas in the brightfield image
Fluo 1 Objects on BF Area / BF Area	Number of cell areas in the first fluorescence image with respect to the detected cell area in the brightfield image
Fluo 2 Objects on BF Area / BF Area	Number of cell areas in the second fluorescence image with respect to the detected cell area in the brightfield image
Avg Fluo CH1 Intensity BC	Average fluorescence intensity of all detected distinct cell areas in the first fluorescence image
Avg Fluo CH2 Intensity BC	Average fluorescence intensity of all detected distinct cell areas in the second fluorescence image

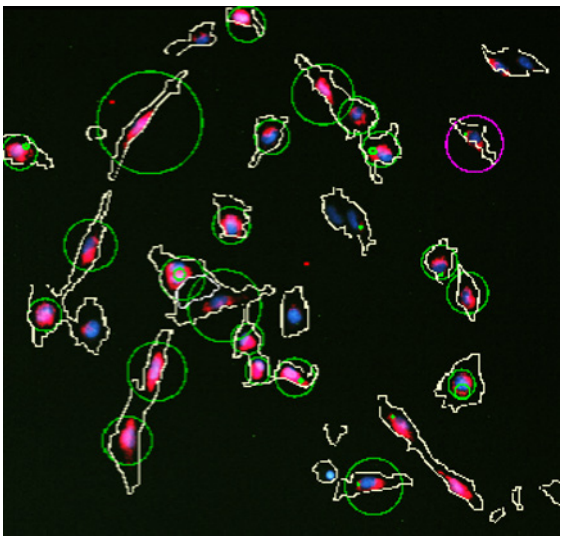
SYNENTEC

EXAMPLE

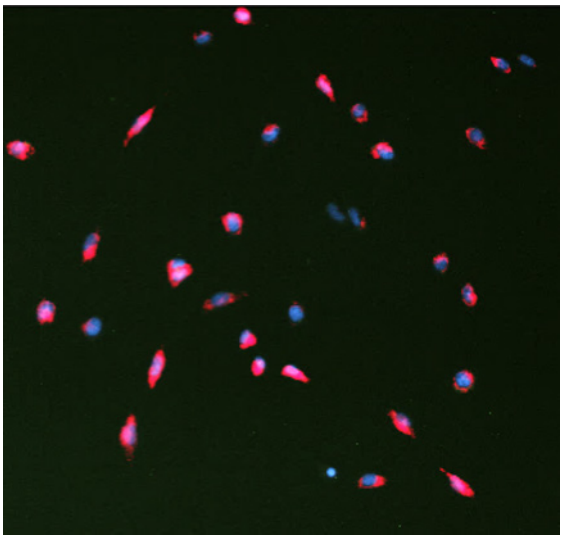
Mitochondria in Fluo CH1 (red fluorescent, dark green labeled) and Golgi in Fluo CH2 (green fluorescent, bright green labeled) detection in a viable cell layer (light yellow labeled in brightfield image). Pink circles mark fluorescence in CH1, red circles CH2 Fluorescence outside detected cells in BF.



Overlay brightfield and fluorescence images with detection



Overlay fluorescence images (nuclei, mitochondria & golgi)



Overlay fluorescence images (nuclei, mitochondria & golgi)

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