



# Current Applications

## SVCell 2.0

SVCell demonstration and assay-ready recipes have been delivered to end-users in over 50 placements. The table below summarizes these placements by type, and the modules required to run the recipes.

Application Type	Description	Required Modules*
Angiogenesis	Quantify tube length, cell clusters, cluster junctions, and network extent. Can be done in phase or fluorescence.	Analysis
Apoptosis	Analyze cell health, count dead cells	Analysis, Decision
Cell classification	Classify and count sarcoma cells in culture	Analysis, Decision
Cell proliferation	Analyze cell region area and confluency	Analysis
Cell count	Detect and count individual cells in culture	Analysis
Cell morphometry classification	Classification of different cell types based on their morphological measures in phase contrast images	Analysis, Decision
Cell tracking	Tracking of cells in phase and fluorescence images; report motion and morphology measures	Analysis, Track
Dendritic spines / neuro muscular junctions	Identify spines or boutons in fluorescence images of dendritic arbors. Report the counts, areas and density along the processes – report the length of the processes.	Analysis
Fluorescence Co-localization	Quantify the co-localization of two or more fluorescent probes (including FRET)	Analysis
GFP emergence (individual cells)	Detect individual cells in the phase contrast image, and measure fluorescence in the fluorescence images	Analysis
GFP emergence (cell region)	Detect cell region in the phase contrast image, and measure fluorescence in the fluorescence images	Analysis
High content screening	Quantify fluorescence images of cells in well plates using a nuclear probe to mark individual cells. Gate responders based on measurements.	Analysis
High content screening - phenotypic	Same as above, but gate responders based on phenotype counts	Analysis, Decision
Histology	Classification of plaques, vessels and other structures in brain slices	Analysis, Decision
Histology	Classify fetal blood cells in maternal samples (color brightfield images)	Analysis, Decision
Histology	Fiber morphometry in tissue slices	Analysis



Application Type	Description	Required Modules*
Mitosis	Analyze the occurrence of dividing cells in phase or fluorescence images	Analysis, Decision
Motion analysis	Quantify the degree of motion of cells in culture without tracking	Analysis
Neurite outgrowth	Quantify the growth of dendritic projections over time	Analysis
Neuron cell classification	Classify and count neuron cells based on their dendritic morphology	Analysis
Plaques	Report the growth of plaques over time	Analysis
Stem cell colony	Detect colonies in phase images (including large whole well composites), report counts, area and fluorescence measures	Analysis
Stem cell colony (cell count)	Detect cell regions within stem cell colonies using the phase channel or fluorescence nuclei marker. Report colony and individual cell metrics.	Analysis
Stem cell colony classification	Classify different types of colonies based on their appearance in phase contrast images (or with reference to fluorescence labels)	Analysis, Decision
Stem cell colony tracking	Detect and track colonies as they move around	Analysis, Tracking
Subcellular kinetics	Detect small puncta in fluorescence images and report the gain / loss of fluorescence through the puncta over time	Analysis
Subcellular tracking	Track subcellular components (i.e. single molecules, vesicles, etc.) in fluorescence images	Analysis, Track
Wound healing	Analyze wound closure over time	Analysis

**SVCell is protected by U.S. Patents**  
 6400849, 6404934, 6456741, 6463175, 6504959, 6507675, 6640008, 6859550, 6941288, 7031529, 7031948, 7096207, 7110603, 7133560, 7139764, 7142718, 7149357, 7203360, 7233931, 7263509, 7293000, 7430320, 7466872, 7574454

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