BD FACSDiscover™ S8 Cell Sorter

with BD CellView™ Image Technology

The first spectral flow cytometer sorter with sort-capable image analysis, expands* the power of cell analysis and sorting to new dimensions by combining spectral flow cytometry with real-time spatial and morphological insights—empowering scientists to address previously impossible-to-answer questions[1,2].

BD

Simplify your workflow with built-in visual inspection capabilities, flexible panel design, automated features and index sorting that correlates immunophenotyping, imaging and downstream assay results*.

Obtain insights on cell populations and characteristics that can be **visually confirmed in real time** during analysis and sorting

Enhance spectral flow cytometry with **spatial and morphological insights** to interrogate and sort cell types that previously could not be identified and isolated

Index flow and cell imaging data with the sort location to support downstream applications

Attain **high-dimensional analysis** with up to five lasers, six image detectors, 78 fluorescent detectors, and FSC and SSC detectors

Flexible sorting: 6-way 5-mL sort, index sorting and additional format options including 96-well and 384-well plates and slides

Patented BD sorting technology features a **fixed-alignment gel-coupled cuvette** eliminating the need for operator to perform daily alignment and facilitating quick nozzle changes

Combine **image features with flow parameters** for subset classification for statistical analysis and sorting

Advanced spectral system*

BD spectral flow cytometry provides more flexibility by maximising and simplifying the choice of fluorochromes detectable per laser. Expanding the palette of colours provides in-depth single-cell insights that can be isolated with high-speed sorting for further downstream studies. The spectral sorter features 78 fluorescent detectors across five lasers with algorithmically optimised filter bandwidths.

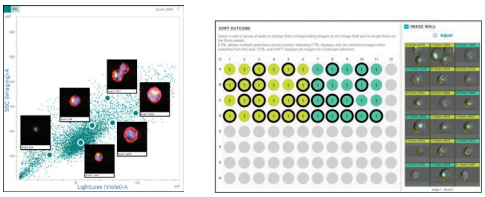
Although spectral cytometry can seem intimidating or complex, our advanced spectral cytometry system offers users a guided user-interface including individually adjustable spectral detectors, auto-alerts if a detector is saturated and the ability to easily assign an autofluorescence-matched negative for each single-color control.

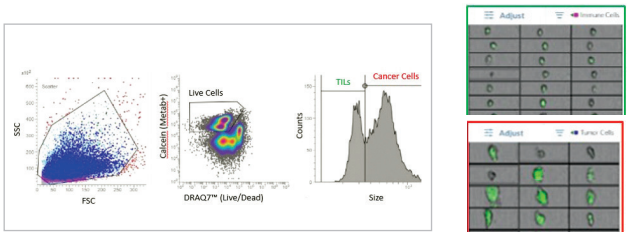
Feel confident in your panel design with BD Horizon RealYellow™ Dye and RealBlue™ Dye technology, engineered to work in tandem with the BD FACSDiscover™ S8 Cell Sorter for high-parameter spectral analysis to reveal biological information. Our approach to spectral aims to alleviate pressure on the user to know how to set up their instrument.

BD CellView™ Image Technology

Sort QC

Combine flow cytometry data with spatial and morphological insights to visually confirm cells of interest, which is used to accurately draw gates and screen out doublets and unwanted events.





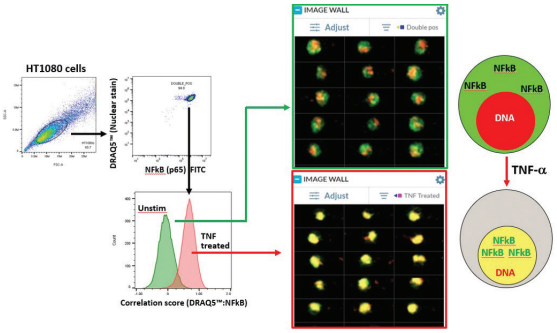
Label-free identification of TILs and cancer cells based on size

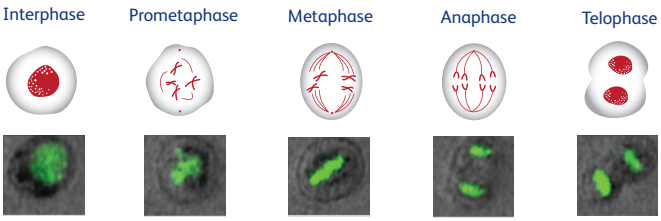
Label-free sorting

Minimise sample preparation and sort precious, sensitive and transiently expressing cells using image-enabled FSC, SSC and light loss detectors to enable accurate cell characterisation without fluorescent antibody labelling.

Fluorescent localisation

Reveal the spatial context of fluorescent signals hidden in flow cytometry. Track the subcellular movement of a protein across organelle boundaries within the cell, such as the NFκB translocation from the cytoplasm to the nucleus.



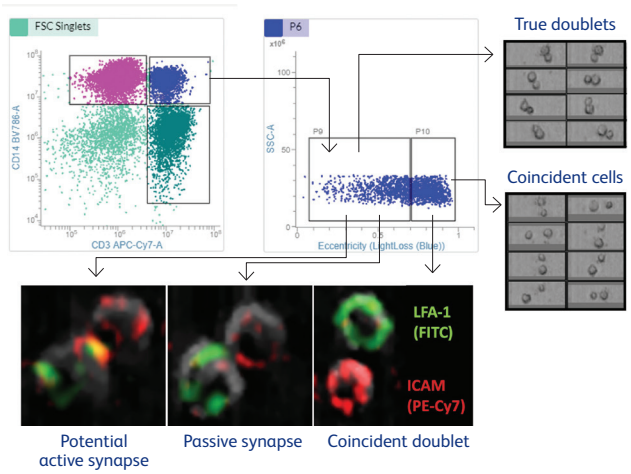


Cell cycle analysis

Flow cytometry methods only rely on a single indicator of DNA content for cell cycle classification, which is incomplete. Image feature analysis can provide insight into DNA distribution information to differentiate the phases of the cell cycle.

Cell-cell interaction

Reveal the spatial context of cells using image feature analysis to identify combinations of engaged cells. Distinguish between two cells that are coincident (passed through the interrogation point in close proximity) and true doublets (cells that are actually touching each other). Further image analysis can reveal receptor accumulation at the site of the cell-cell synapse (active synapse).



Configurations[2]				
Number of spectral lasers	3	4	4	5
Number of fluorescent detectors	44	56	66	78
Total detectors	52	64	74	86
Lasers[2]				
Ultraviolet laser (349 nm)			●	●
Violet laser (405 nm)	●	●	●	●
Blue laser (488 nm)	●	●	●	●
Yellow-green laser (561 nm)		●		●
Red laser (638 nm)	●	●	●	●

For Research Use Only. Not for use in diagnostic or therapeutic procedures. BD flow cytometers are Class 1 Laser Products. BD Horizon RealBlue™ Reagents are not released and will be available in late 2022.

*Compared to traditional flow cytometry instruments and analysis.

References: 1. Schraivogel D, Kuhn T, Rauscher B et al. Science 375, 315-320 (2022). **2.** BD FACSDiscover™ S8 Cell Sorter User Manual (23-21414-00).

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