

Reasons to take your high-dimensional research beyond the limits of fluorescence



Precision data with discrete signals

Not impacted by spectral overlapping of fluorochromes and tissue autofluorescence



Capture rare or unexpected cell populations

Unbiased, high-dimensional profiling of 40-plus markers to uncover diverse immune subpopulations





Easy panel design to complete experiments faster

Large number of available antibodies without overlap simplifies panel design and expansion



Start with ready-to-go panels and easily swap markers in and out



Minimal sample required, saving on limited clinical research material

Simultaneous staining and detection from a single tube or tissue scan, without multiple staining controls or time-consuming cyclic protocols



Reproducible and comparable

Stained samples can be frozen, stored and shipped to support longitudinal studies and multi-site workflows





Trusted by researchers

The leading technology for high-parameter immune research











>200 clinical trials

Cytometry by time-of-flight (CyTOF[®] technology)

Applies purified heavy-metal labels, not normally found in biological systems, instead of fluorophores



Risks of fluorescence

for high-parameter studies



Missed cell populations or false positives



More iterations required in panel design



Reduced sensitivity where fluorescence overlap occurs



Higher resource use to compensate for spectral overlap



From sample collection to high-dimensional insights in 3 days*

Whether you are analyzing suspension or tissue samples, time-of-flight (TOF) technology combined with Maxpar® reagents enables a streamlined end-to-end workflow to complete high-parameter experiments faster than fluorescence-based detection.

Flow cytometry

Get started with the validated Maxpar[®] Direct[™] Immune Profiling Assay[™]



1 tube 30 markers

(<300 µL of whole blood)

5-minute analysis



37 cell populations



Surface profiles Cell proliferation Apoptosis Metabolism Phosphoproteins Cytokine production Transcription factors

Imaging Mass Cytometry

Kits and ready-to-go high-plex panels

Simultaneous staining

One-step detection





Clear spatial imaging





9475m 146Nd 1492m 1516u 1525m 1525m 1949m 1996d

Minimal signal overlap



The CyTOF flow cytometry image (far left) shows minimal spillover between metal channels when compared with the same panel from a competitor spectral flow cytometer (left).

Quantify and visualize 40-plus markers in a single run. Without compromise.

*After panel and image analysis optimization

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For Research Use Only. Not for use in diagnostic procedures.

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Get started with our Maxpar IMC[™] Cell Segmentation

High-plex data in minutes





Tissue architecture Protein modifications Signaling pathway activation Cell injury states Cell proliferation Transcriptional signatures

The Imaging Mass Cytometry[™] image (far left) shows many welldefined red signals from CD68 that are indistinct or missing from the fluorescence image (left).