

# Cell-ID 20-Plex Pd Barcoding Kit

Ask bigger questions.

Get higher-confidence answers.

Mass cytometry has opened new doors to discovery by giving researchers the power to interrogate more than 40 parameters simultaneously on millions of cells, unveiling new cell types and functions. With the launch of Fluidigm's Cell-ID™ 20-Plex Pd Barcoding Kit (No. 201060), scientists can now vastly expand their throughput and get more robust data to reveal subtle phenotypes. The Cell-ID Kit enables barcoding of up to 20 samples, which are then stained and acquired as a single multiplexed sample (Figure 1). Perform your experiments with all the samples, time points and conditions you need to enable comprehensive cellular profiling.

## Advantages of Barcoding

- **Throughput:** Reduces processing time throughout the entire experimental workflow.
- **Data quality:** Eliminates sample-to-sample variation introduced when samples are stained and collected individually. Discriminates cross-sample doublets by filtering out events with more than three Pd isotopes.
- **Sample conservation:** Enables efficient usage of precious samples by allowing you to combine multiple samples in one tube.
- **Accessibility:** Utilizes isotopes that are compatible with existing panel designs and can be used on all CyTOF systems.

“For all practical purposes, before CyTOF and mass-tag barcoding, the experiments that I wanted to do were impossible.”

–Dr. Eli Zunder, stem cell biologist, Stanford University.

	Palladium Isotope					
	102	104	105	106	108	110
Sample Code 1	•	•	•			
Sample Code 2	•			•		
Sample Code 3	•				•	
Sample Code 4	•					•
Sample Code 5		•	•	•		
Sample Code 6			•		•	
Sample Code 7				•		•
Sample Code 8		•			•	
Sample Code 9			•			•
Sample Code 10	•				•	•
Sample Code 11		•	•	•		
Sample Code 12			•		•	
Sample Code 13		•				•
Sample Code 14			•		•	
Sample Code 15	•			•		
Sample Code 16		•			•	
Sample Code 17			•	•	•	
Sample Code 18				•		•
Sample Code 19			•		•	•
Sample Code 20	•				•	•

Figure 1. Each barcode consists of a unique combination of three palladium (Pd) isotopes.

# Workflow



## Contents

Component	Volume
3 sets of 20 barcodes in PCR tubes	10 µL each tube
Maxpar® 5X Fix I Buffer	15 mL
Maxpar Cell Staining Buffer	500 mL
Maxpar 10X Barcode Perm Buffer	50 mL
Maxpar PBS	500 mL

## References

Behbehani, G.K., Thom, C., Zunder, E.R. et al. "Transient partial permeabilization with saponin enables cellular barcoding prior to surface marker staining." *Cytometry* 85 (2014): 1011–1019.

Zunder, E.R., Finck, R., Behbehani, G.K. et al. "Palladium-based mass tag cell barcoding with a doublet-filtering scheme and single-cell deconvolution algorithm." *Nature Protocols* 10 (2015): 316–333.

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