

## Veri-Cells™ Heavy Metal (Ta) PBMC

<b>Catalog# / Size</b>	427201 / 10 tests 427203 / 50 tests
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Control Cells
<b>Description</b>	<p>The reconstituted Veri-Cells™ Heavy Metal Ta PBMC are intended to offer mass cytometry laboratories stabilized human blood cells which have been labeled with the heavy metal tantalum. When mixed with sample cells suspensions, the cells of interest can be differentiated from the labeled control PBMCs using the tantalum signal with minimal variability across experiments. These cells have been verified to work with commonly tested cell surface markers such as CD3, CD4, CD8, CD14, CD16, CD19, CD38, CD56, CD123 and HLA-DR.</p> <p>This product contains human cells, a potentially biohazardous material. Blood used in preparation of these samples was tested and found to be negative for antibody and nucleic acid testing against human immunodeficiency virus (HIV), Hepatitis B and C virus, HTLV (Human T-lymphotrophic virus I and II), surface antigen for Hepatitis B (HBsAg) virus, syphilis and West Nile Virus using FDA approved methods. Biological tests are not 100% accurate. Use standard precautions when handling, and treat as if the product is capable of transmitting disease. When handling or disposing, follow precautions described in CDC and FDA recommendations and OSHA Bloodborne Pathogen guidelines.</p>

### Kit Contents

<b>Kit Contents</b>	<p><b>Cat. No. 427201</b></p> <ul style="list-style-type: none"> <li>• 2 vials of Veri-Cell™ Heavy Metal (Ta) PBMC (approximately 1 X 10<sup>6</sup> cells per vial)</li> <li>• 1 vial of 0.7 ml Veri-Cells™ Buffer A Plus</li> </ul> <p><b>Cat. No. 427203</b></p> <ul style="list-style-type: none"> <li>• 10 vials of Veri-Cell™ Heavy Metal (Ta) PBMC (approximately 1 X 10<sup>6</sup> cells per vial)</li> <li>• 5 vials of 0.7 ml Veri-Cells™ Buffer A Plus</li> </ul>
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Veri-Cells™ Buffer A Plus is an improved version of the original Veri-Cells™ Buffer A to improve staining performance with tandem dyes.

### Product Details

<b>Formulation</b>	<p>Cat. No. 427201: 2 vials each containing <math>\geq 1 \times 10^6</math> lyophilized human peripheral blood mononuclear cells (PBMC).</p> <p>Cat. No. 427203: 10 vials each containing <math>\geq 1 \times 10^6</math> lyophilized human peripheral blood mononuclear cells (PBMC).</p>
<b>Preparation</b>	The Veri-Cells™ Heavy Metal Ta PBMC kit is prepared from 2 vials of lyophilized human PBMCs labeled with tantalum and a vial of Veri-Cells™ Buffer A Plus.
<b>Storage &amp; Handling</b>	Store the kit at 2°C - 8°C upon receipt. Do not open sealed pouch until ready to use. Once reconstituted, the cells may be used for up to five days if properly stored at 2°C - 8°C in the buffer provided.
<b>Application</b>	<a href="#">FC, CyTOF® - Quality tested</a>
<b>Recommended Usage</b>	50µL per test (after reconstitution with 325 µL of Veri-Cells™ Buffer A Plus)
<b>Application Notes</b>	The Veri-Cells™ Heavy Metal Ta PBMC kit contains stabilized human blood cells which have been pre-labeled with the metal tantalum (Ta). The reconstituted human PBMCs can be added to test samples as a control for CyTOF applications. The cells have been verified to work with commonly tested cell markers such as CD3, CD4, CD8, CD14, CD16, CD19, CD38, CD56, CD123 and HLA-DR. Assessing the suitability of this product as a control for the end user's molecule of interest is

recommended. The tantalum signal is confirmed by a CyTOF Helios or equivalent mass cytometry instrument.

Cell subset	Acceptance Criteria, % positive of lymphocyte gate
CD3 <sup>+</sup>	55-95
CD4 <sup>+</sup> CD3 <sup>+</sup>	30-65
CD8 <sup>+</sup> CD3 <sup>+</sup>	10-40
CD19 <sup>+</sup> CD3 <sup>-</sup>	3-30
CD56 <sup>+</sup> CD16 <sup>+</sup> CD3 <sup>-</sup>	3-40

**Note on indicated ranges:** Percent positive values are obtained based on gates set on unstained cells. The antibodies used for testing were the following: CD56 PE (clone 5.1H11), CD16 PE (clone 3G8), CD19 APC (clone HIB19), CD3 FITC (clone UCHT1), CD4 PE/Cy7 (clone RPA-T4), and CD8 APC/Cy7 (clone RPA-T8). Variability in antibodies used, instruments, staining conditions and other factors may influence end-user values. The Certificate of Analysis specific values are provided as a reference. It is recommended that individual laboratories establish its own control values and ranges for each parameter based on laboratory specific conditions and protocols.

Please use our [CoA Look-Up Tool](#) to find the expected lot-specific frequencies of certain cell populations included within each lot of Veri-Cells™ Heavy Metal (Ta) PBMC.

#### Additional Product Notes

Veri-Cells™ Buffer A Plus is an improved version of the original Veri-Cells™ Buffer A to improve staining performance with tandem dyes.

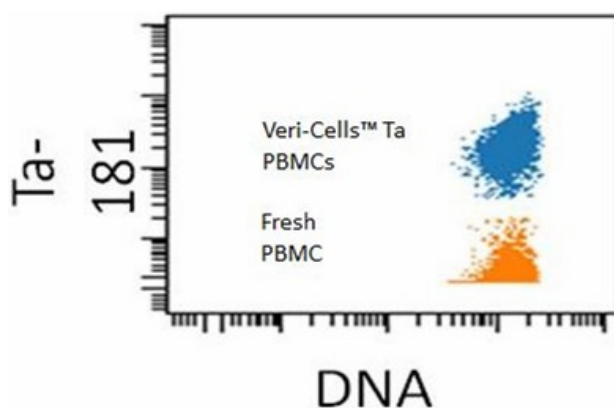
## Antigen Details

Gene ID NA

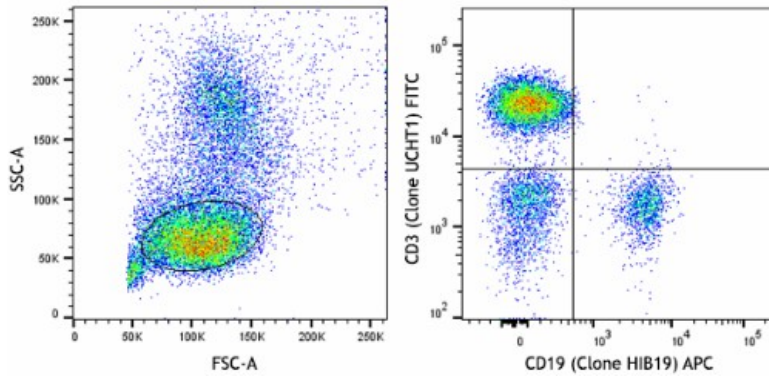
## Related Protocols

[Protocol for using Veri-Cells™](#)

## Product Data



Unlabeled cells may be differentiated using the tantalum signal. Data provided by Adeeb Rahman, PhD. Mt. Sinai Human Immune Monitoring Center, Hess Center for Science and Medicine.



Scatter profile (left) and staining for CD3 (clone UCHT1) FITC and CD19 (clone HIB19) APC (right) on Veri-Cells™ Heavy Metal (Ta) PBMC. CD3 and CD19 staining shown on lymphocyte population (gate on left scatter plot).

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