Cell ID™ 127 IdU

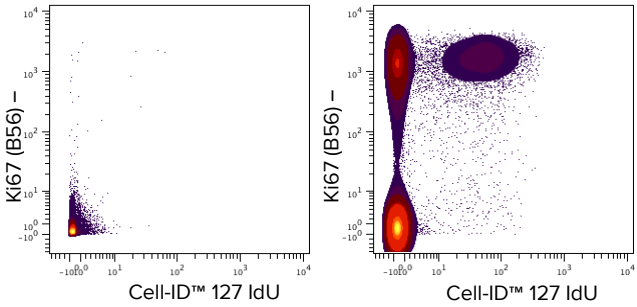
Catalog#: 201127
Package Size: 100 ul

Storage:
- Upon receiving, this product should be stored at –20°C.

WARNING Before handling any chemicals, refer to the Safety Data Sheet (SDS) provided by the manufacturer, and observe all relevant precautions.

Description:

IdU (5-Iodo-2′ -deoxyuridine) contains pyrimidine nucleoside that is recognized as a thymidine substitute in DNA synthesis. IdU incorporates into DNA of proliferating cells and is a marker of S-phase of the cell cycle. Since IdU incorporation can be measured directly in S-phase cells, the need for an antibody or DNA denaturation can be bypassed. Cell-ID™ 127 IdU is ideally detected in the 127I (iodine) channel of the CyTOF® mass cytometer.



Human PBMCs were incubated for 3 days in media alone (left) or with PHA (right). Cells were then stained with Cell-ID™ 127 IdU, followed by fixation, permeabilization and staining with 168Er-anti-Ki67 (B56). Total viable singlet events are displayed in the analysis.

Important Product Notes:

Cell-ID™ 127 IdU staining for 30 minutes at a final concentration of 50 µM is suggested in the protocol below, and it has been found to work well for the majority of PBMC samples tested. However, these parameters should be optimized for individual cell types and experiments. We recommend staining with Cell-ID™ 127IdU at a concentration between 50-100 µM for between 30-45 minutes.

IdU Staining Protocol:

1. Prepare cells of interest from cell culture or primary tissue and add Cell-ID™ 127 IdU to final concentration of 50 µM (1000X dilution of 50 mM stock solution, i.e. 1 µL Cell-ID™ 127 IdU added to 1 mL of cell suspension containing 1 X 10^6/ml of cells.
2. Mix well and incubate at 37°C for 30 minutes.
3. At the end of incubation, transfer cells to an appropriate tube and wash with MaxPar® Cell Staining Buffer, using 2-5X the volume of the cell suspension; centrifuge and discard supernatant by aspiration.
4. Repeat one more wash with MaxPar® Cell Staining Buffer; centrifuge and discard supernatant by aspiration.
5. Proceed with usual procedure for staining

Note: If the staining procedure is not performed immediately following the wash step, standard precautions for staining live cells should be observed to maintain cell viability (i.e. wash cells with complete growth medium instead of MaxPar® Cell Staining Buffer, keep cells at 4°C until they are fixed).

6. Detect Cell-ID™ 127IdU in the 127I channel of the CyTOF or CyTOF 2 mass cytometer.

References:

Single-Cell Mass Cytometry Adapted to Measurements of the Cell Cycle. Gregory K. Behbehani, Sean C. Bendal, Matthew R. Clutter, Wendy J. Fantl, Garry P. Nolan. Cytometry part A. 2012 Jun; 81A: 552-566.

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