



Quick Reference Card

Muse™ Cell Cycle Kit MCH100106

To determine the cell cycle phases of cellular samples

For Research Use Only; not for use in diagnostic procedures.

Storage Conditions

Store the Muse™ Cell Cycle Kit at 2 to 8°C, protected from light.

Kit Components

Muse™ Cell Cycle Reagent (Part No. 4700-1495, 100 tests/bottle)

Materials Recommended

- Muse™ Cell Analyzer
- Cell suspension
- Ethanol 70%
- Complete growth medium appropriate for your cells
- 12 x 75-mm tubes
- Micropipettors
- Disposable micropipettor tips
- Microcentrifuge tubes with screw caps, 1.5 mL (VWR Catalog No. 16466-030, or equivalent)
- Muse™ Cell Dispersal Reagent (Catalog No. MCH100107), optional
- Vortex mixer
- 1X Phosphate-buffered saline (PBS)

Assay Protocol

Prepare cellular samples for cell cycle staining as follows:

Transfer 1×10^6 cells to each tube.

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Centrifuge cells at 300 x g for 5 minutes and wash once with 1X PBS.

↓
While mixing/resuspending cells, slowly add 1 mL of ice cold 70% ethanol.*

↓
Incubate for at least 3 hours at -20°C.

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Add 200 µL of fixed cells to a new tube.

↓
Centrifuge the cells at 300 x g for 5 minutes and wash once with 1X PBS.

↓
Add 200 µL of Muse™ Cell Cycle reagent to each tube and incubate for 30 minutes at room temperature in the dark.

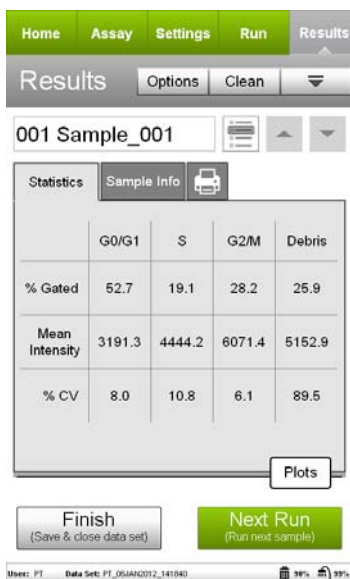


* For preferred ethanol sources, refer to the kit user's guide.

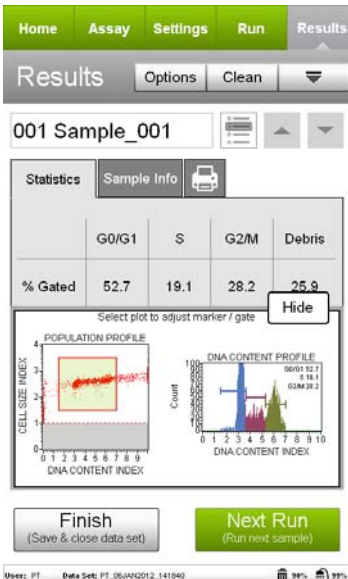
Expected Results

Figures A and B show typical results obtained with the Muse™ Cell Cycle reagent. Log-phase Jurkat T cells were ethanol-fixed overnight and stained according to the instructions outlined in Assay Protocol.

A



B



Figures A and B. Example Data: Results obtained with the Muse™ Cell Cycle software module using Jurkat cells stained with Muse™ Cell Cycle reagent and acquired on the Muse™ Cell Analyzer. Figure A shows results without dot plots, while Figure B shows the same results with the optional dot plots shown. The statistics show the percentage of cells in each population, the mean intensity for each peak, and the coefficient of variation (%CV) for each peak. The first plot in Figure B shows the DNA content vs the Cell Size Index dot plot; the second plot shows the distribution of the cell cycle phases (G0/G1, S, and G2/M) in histogram format. The DNA histogram results show the results for the percentage of cells in G0/G1 (M1), S (M2), and G2/M (M3).

For more information, refer to the kit user's guide, which can be found at www.millipore.com/muse.

Related Products

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Muse™ System Check Kit – MCH100101

Muse™ Count & Viability Kit (100T) – MCH100102

Muse™ Count & Viability Kit (600T) – MCH600103

Muse™ Count & Viability Kit (200X) – MCH100104

Muse™ Annexin V & Dead Cell Kit – MCH100105

Muse™ Cell Dispersal Reagent – MCH100107



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