

Quick Reference Card

Muse® MultiCaspase Kit MCH100109

To determine the percentages and concentrations of cells exhibiting caspase activity and cell death

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

Storage Conditions

Store the Muse® MultiCaspase Kit at 2 to 8°C, protected from light.

Kit Components

- Muse® MultiCaspase Reagent (Part No. 4700-1530, 100 tests/vial)
- Muse Caspase 7-AAD (Part No. 4700-1510, 100 tests/vial)
- Muse 10X Caspase Buffer (Part No. 4700-1535, 100 tests/vial)
- 1X PBS (Part No. 4700-1515, 100 tests/vial)
- Anhydrous DMSO (Part No. 4300-0160, 100 tests/vial)

Materials Recommended

- Guava® Muse® Cell Analyzer
- Cell suspension, untreated and treated to undergo apoptosis
- Micropipettors
- Disposable micropipettor tips
- Microcentrifuge tubes with screw caps, 1.5 mL (VWR Catalog No. 16466-030, or equivalent)
- Vortex mixer

Assay Protocol

Culture cells, including positive and negative controls, for appropriate time to induce apoptosis.

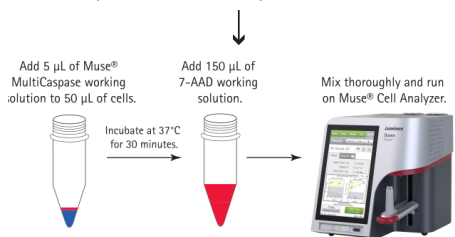
↓
Dilute 10X Caspase Buffer to 1X with DI water.

↓
Prepare cell samples in 1X Caspase buffer for incubation with MultiCaspase working solution.

↓
Resuspend content of Muse® MultiCaspase Reagent with 50 µL of DMSO.

↓
Dilute Muse MultiCaspase Reagent 1:160 with 1X PBS to make MultiCaspase working solution.

↓
Prepare Muse Caspase 7-AAD working solution by adding 2 µL of 7-AAD to 148 µL of 1X Caspase Buffer.



NOTE: A detailed kit user's guide can be found at www.luminexcorp.com/flowkits.

Expected Results

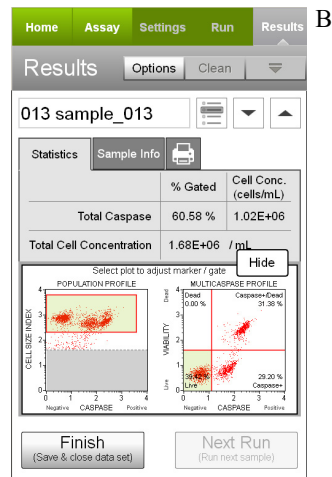
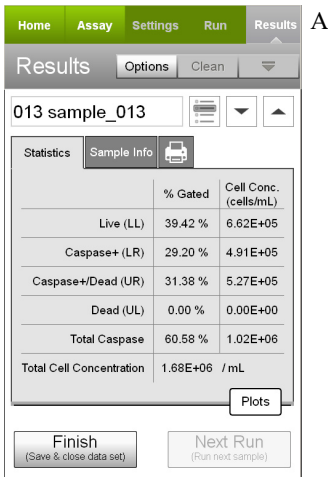
Figures A and B show an example of results obtained using the Muse® MultiCaspase Kit to stain Jurkat cells treated with staurosporine to induce apoptosis.

Events in each of the four quadrants are as follows:

- Lower-left quadrant: viable cells [Caspase (-) and Dead Cell Marker (-)]
- Lower-right quadrant: cells exhibiting caspase activity [Caspase (+) and Dead Cell Marker (-)]
- Upper-right quadrant: cells in the late stages of activated caspase or dead (by necrotic or caspase mechanisms) [Caspase (+) and Dead Cell Marker (+)]
- Upper-left quadrant: cells that have died, not through the caspase pathway [Caspase (-) and Dead Cell Marker (+)]

Figures A and B display example data: results obtained with the Muse MultiCaspase software module for Jurkat cells stained with the Muse MultiCaspase Kit and acquired on the Guava® Muse Cell Analyzer. Figure A shows results without dot plots, while Figure B shows results with optional dot plots. The statistics show the cells/mL in the stained cell sample and the percentages of each population. The first plot in Figure B shows Caspase vs. Cell Size and the second plot shows Viability vs. Caspase, providing data on four cell populations - Live, Activated Caspase, Activated Caspase/Dead, and Dead cells.

Figures A and B



The latest version of Muse Software, which includes all assay modules, as well as the kit user's guide, can be found at www.luminexcorp.com/flowkits.

IMPORTANT: Ensure you are using version 1.3, or later versions of the software, when running this assay.

Related Products

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- Muse® System Check Kit - MCH100101
- Muse® Count & Viability Kit (100T) - MCH100102
- Muse® Annexin & Dead Cell Kit - MCH100105
- Muse® Cell Cycle Kit - MCH100106
- Muse® Caspase-3/7 Kit - MCH100108
- Muse® MitoPotential Kit - MCH100110

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