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Quick Reference Card

Muse® MAPK Activation Dual Detection Kit

MCH200104

To measure the extent of ERK1/2 phosphorylation relative to the total ERK1/2 expression in any given cell population

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

Storage Conditions

All reagents must be stored at 2–8°C.

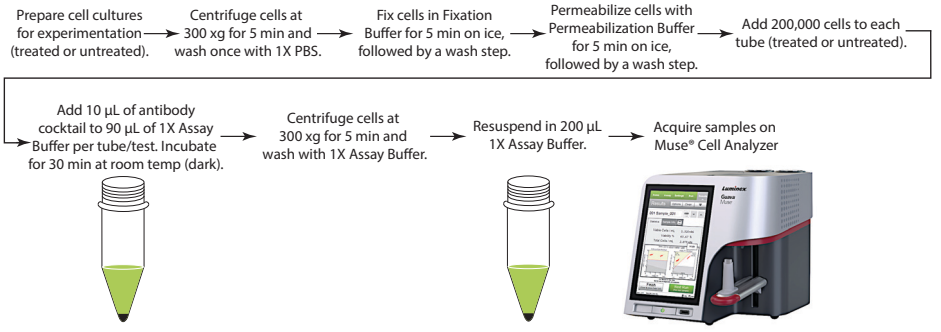
Materials Recommended

- Guava® Muse® Cell Analyzer
- Test tubes for sample prep and storage
- Tissue culture reagents, i.e., HBSS, PBS w/o Ca^{2+} or Mg^{2+}, cell dislodging buffers, etc.
- Micropipettes and tips
- Table top centrifuge
- Mechanical vortex
- Deionized water
- Cells of interest in suspension
- Microcentrifuge tubes with screw caps, 1.5 mL (VWR, Catalogue No. 16466-030, or equivalent)

Kit Components

- 20X Anti-phospho-ERK1/2 (Thr202/Tyr204, Thr185/Tyr187), PE: (Part No. CS208197), 250 µL
- 20X Anti-ERK1/2, PECy5: (Part No. CS208198), 300 µL
- 5X Assay Buffer: (Part No. CS202124), 55 mL
- Fixation Buffer: (Part No. CS202122), 13 mL
- 1X Permeabilization Buffer: (Part No. CS203284), 14 mL

Assay Protocol



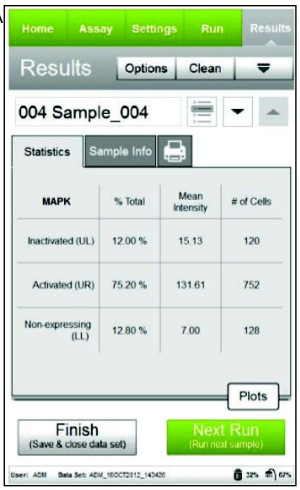
Expected Results

Results obtained using healthy Jurkat cells exposed to 100 ng/mL PMA for 5 minutes to induce a MAPK signaling cascade response, fixed, permeabilized, and then stained with the Muse® MAPK Activation Dual Detection Kit and analyzed on the Guava® Muse Cell Analyzer. Figure A shows the results summary, while Figure B shows results displayed by both dot plot and bar graph data.

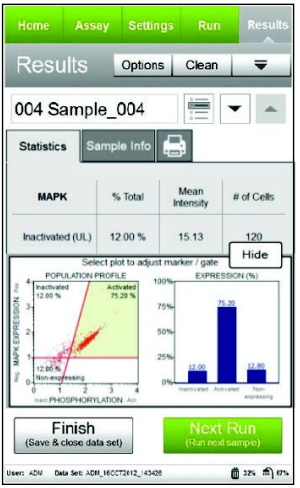
The statistics captured in this assay show the relative percentages for each population as it is calculated within the total cell population. Cells which express ERK1/2 can be seen by the data on the top two quadrants of the dot plot (inactivated and activated), representing about 87.2% of the total cell population. But of this cell population, 75.2% is activated upon treatment, indicating activation of the MAPK signaling pathway is present. By presentation of both datasets, one can now determine the total phospho ratio within their testing samples.

For more information, refer to the comprehensive kit user's guide, which can be found at *www.luminexcorp.com/flowkits*. (search for Catalogue Code MCH200104)

A



B



Figures A and B show an example of results obtained using the Muse® MAPK Activation Dual Detection Kit.

Related Products

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Muse® EGFR-RTK Activation Dual Detection Kit – MCH200102
Muse® PI3K Activation Dual Detection Kit – MCH200103
Muse® H2A.X Activation Dual Detection Kit – MCH200101
Muse® Bcl-2 Activation Dual Detection Kit – MCH200105
Muse® System Check Kit – MCH100101
Muse® Count & Viability Kit – MCH100102

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*.

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