

**ab176740 - Fixable Cell
Viability Assay Kit
(Orange Fluorescence,
for 405 nm excitation)**

Instructions for Use

For evaluation of the viability of mammalian cells by fluorescent labeling and flow cytometry.

This product is for research use only and is not intended for diagnostic use.

Version: 2 Last Updated: 12 February 2026

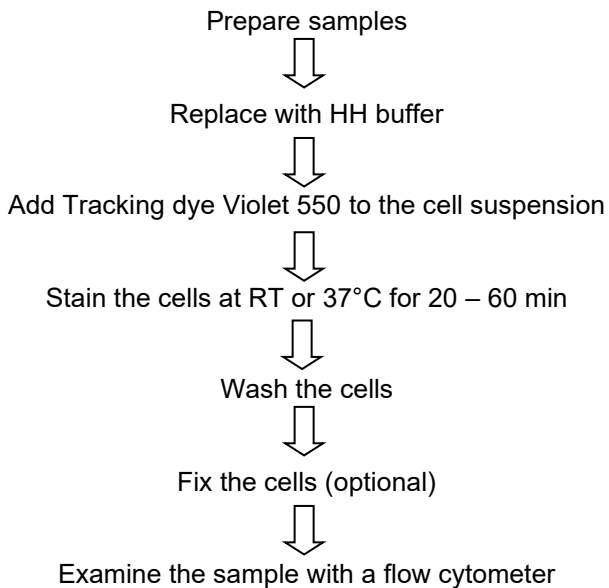
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1. Introduction

Abcam's Fixable Cell Viability Assay Kit (Orange Fluorescence, for 405 nm excitation) (ab176740) is used to evaluate the viability of mammalian cells by flow cytometry. The fluorescent dye provided in the kit is retained in cells by reacting with cellular components. For viable cells, only the cell-surface amines are available to react with the dye while for the necrotic cells or the other cells with compromised membranes, the reactive dye reacts with cell surface amines and intracellular amines, resulting in more intense fluorescent staining. The difference in fluorescence intensity between the live and dead cell populations is ~100-500 folds and can be completely preserved after fixation. The approximate fluorescence excitation is 398 nm and emission maximum is 512 nm. The Excitation source is 405 nm.

2. Protocol Summary



3. Materials Supplied

Item	200 tests
Tracking dye Violet 550	1 vial
DMSO	1 x 200 μ L

4. Storage and Stability

Upon receipt, store kit at -20°C. Avoid exposure to light and moisture (store desiccated).

5. Materials Required, Not Supplied

- Sodium azide and serum/protein free buffer such as HHBS Buffer (1X Hanks and 20 mM HEPES buffer)
- CO₂ incubator
- Pipettes and pipette tips
- FACS tubes

6. Assay Protocol

1. Reagent Preparation:

a) 500X DMSO stock solution

Add 200 μ L DMSO into the vial of Tracking dye Violet 550 mix it well by vortexing to have a 500X DMSO stock solution.

NOTE: The unused Tracking dye Violet 550 stock solution should be aliquoted and stored at -20°C . Avoid repeated freeze/thaw cycles.

2. Sample Analysis:

- a) Prepare cells for flow cytometry staining using 1X Hanks and 20 mM HEPES buffer (HHBS) or a sodium azide- and serum/protein free buffer of your choice.
- b) Wash cells once with HHBS or sodium azide- and serum/protein free buffer of your choice.
- c) Resuspend cells at $5-10 \times 10^6/\text{mL}$ in HHBS or sodium azide- and serum/protein free buffer of your choice.
- d) Add 1 μ L of Tracking dye Violet 550 stock solution (see Reagent Preparation) to 0.5 mL of cells /assay and mix it well.
- e) Incubate for 20-60 min at room temperature or 37°C , 5% CO_2 incubator, protected from light.

NOTE: The optimal stain concentrations and incubation time should be experimentally determined for different cell lines.

- f)** Wash cells twice and resuspend cells in with HHBS or buffer of your choice.
- g)** Fix cells as desired (optional).
- h)** Analyze cells with a flow cytometer.

7. Data Analysis

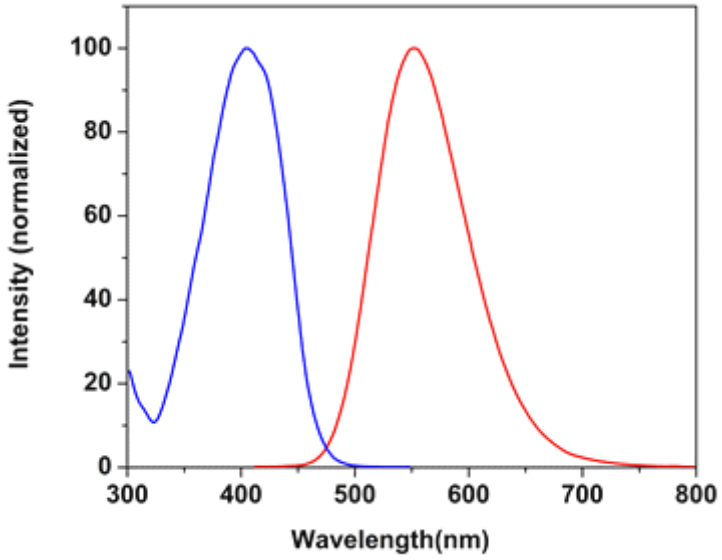


Figure 1. Spectrum for ab176740.

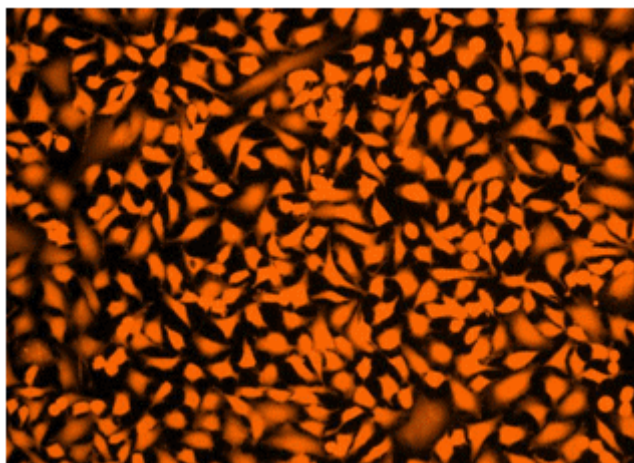


Figure 2. Fluorescent imaging of HeLa cells fixed with formaldehyde and labeled with ab176740 in a black wall/clear bottom 96 well plate.

Technical Support

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