Nuclear Violet™ DCS1

Catalog number: 17549
Unit size: 0.5 ml

Component	Storage	Amount
Nuclear Violet™ DCS1	Freeze (< -15 °C), Minimize light exposure	0.5 mL (5 mM)

OVERVIEW

Our Nuclear Violet™ DCS1 is a fluorogenic, DNA-selective and live cell-impermeant dye for analyzing DNA content in dead or fixed cells. The Nuclear Violet™ DCS1 has its blue fluorescence significantly enhanced upon binding to DNA. It can be used in fluorescence imaging, microplate and flow cytometry applications. It is well excited by violet laser at 405 nm, and emits blue/cyan fluorescence light around an emission maximum at ~440 nm, and provides an excellent tool for flow cytometers equipped with a 405 nm violet laser source. This DNA-binding dye might be used for multicolor analysis of live/dead cells with the filter sets of Pacific Blue and BD Horizon V450.

KEY PARAMETERS

Fluorescence microscope

Excitation	DAPI filter set
Emission	DAPI filter set
Recommended plate	Black wall/clear bottom

PREPARATION OF WORKING SOLUTION

Nuclear Violet™ DCS1 working solution
Dilute the Nuclear Violet™ DCS1 stock solution (5 mM) to 0.5 to 5 µM final concentration in the buffer of your choice.

SAMPLE EXPERIMENTAL PROTOCOL

The following protocol can be adapted for most cell types. Growth medium, cell density, the presence of other cell types and factors may influence staining. Residual detergent on glassware may also affect staining of many organisms, and cause brightly stained material to appear in solutions with or without cells present.

1. Add Nuclear Violet™ DCS1 working solution into the fixed, dead or apoptotic cells (either suspension or adherent) and stain the cells for 15 to 60 minutes. In initial experiments, it may be best to try several dye concentrations to determine the optimal concentration that yields the desired result.

2. Directly analyze the cellular staining with fluorescence microscopy, fluorescence microplate reader, or flow cytometry.

   Note Optional: Cells can be washed with PBS prior to analysis.

EXAMPLE DATA ANALYSIS AND FIGURES

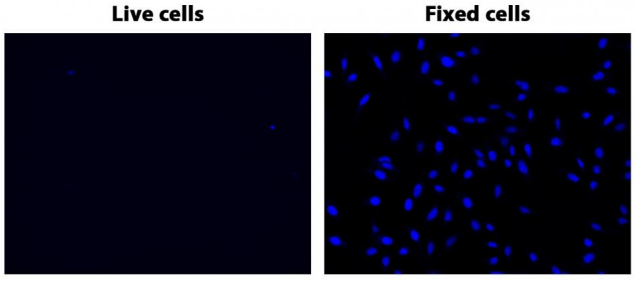

Figure 1. Fixed and Live (non-fixed) HeLa cells plated on 96-well plates, incubated with Nuclear Blue™ DCS1 1 µM for 20 minutes and imaged with DAPI channel.

DISCLAIMER

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