

**Nuclear Red™ DCS1 \*5 mM DMSO Solution\***

Catalog number: 17552  
Unit size: 0.5 ml

Component	Storage	Amount (Cat No. 17552)
Nuclear Red™ DCS1	Freeze (< -15 °C), Minimize light exposure	1 vial (0.5 ml)

**OVERVIEW**

Our Nuclear Red™ DCS1 is a fluorogenic, DNA-selective and cell-impermeant dye for analyzing DNA content in dead, fixed or apoptotic cells. The Nuclear Red™ DCS1 has its red fluorescence significantly enhanced upon binding to DNA. It can be used in fluorescence imaging, microplate and flow cytometry applications. This DNA-binding dye might be used for multicolor analysis of dead, fixed or apoptotic cells with proper filter sets.

**AT A GLANCE**

**Spectral Properties**

Ex/Em = 642/657 nm (bound to DNA)

**KEY PARAMETERS**

**Fluorescence microscope**

Emission	Cy5 Filter
Excitation	Cy5 Filter
Recommended plate	Black wall/clear bottom

**SAMPLE EXPERIMENTAL PROTOCOL**

*Caution: 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 the staining of many organisms and cause brightly stained material to appear in solutions with or without cells present.*

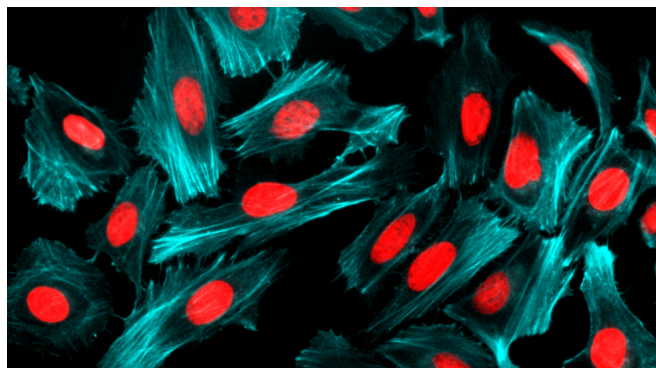
1. Add Nuclear Red™ DCS1 (2 to 10 μM) into the fixed, dead or apoptotic cells (either suspension or adherent) and incubate the cells for 15 to 60 minutes.

**Note:** In initial experiments, it is advisable to test a wide range of dye concentrations in order to determine the optimal concentration that yields the desired result.

**Optional:** Wash the cells twice with Hanks and 20 mM HEPES buffer (HBSS) or a buffer of your choice. Then fill the wells with fresh HBSS or growth medium.

2. Observe the cells using a fluorescence microscope, fluorescence microplate reader, or flow cytometer equipped with the desired filter set.

**EXAMPLE DATA ANALYSIS AND FIGURES**



**Figure 1.** Fluorescence image of HeLa cells stained with with Nuclear Red™ DCS1 and Phalloidin-iFluor® 405 Conjugate. The cells were fixed in 4% formaldehyde, permeabilised with 0.2% Triton X-100 followed by staining with Phalloidin-iFluor® 405 Conjugate (#23111) and counter staining with Nuclear Red™ DCS1 (#17552). The image was acquired with fluorescence microscope using Violet and Cy5 filters.

**DISCLAIMER**

AAT Bioquest provides high-quality reagents and materials for research use only. For proper handling of potentially hazardous chemicals, please consult the Safety Data Sheet (SDS) provided for the product. Chemical analysis and/or reverse engineering of any kit or its components is strictly prohibited without written permission from AAT Bioquest. Please call 408-733-1055 or email info@aatbio.com if you have any questions.