

## Nuclear Blue™ DCS1

### Ordering Information

Product Number: 17548 (5 mM)

### Storage Conditions

Keep at -20 °C and avoid exposure to light

### Spectral Properties

Ex/Em = 355/458 nm (bound to DNA)

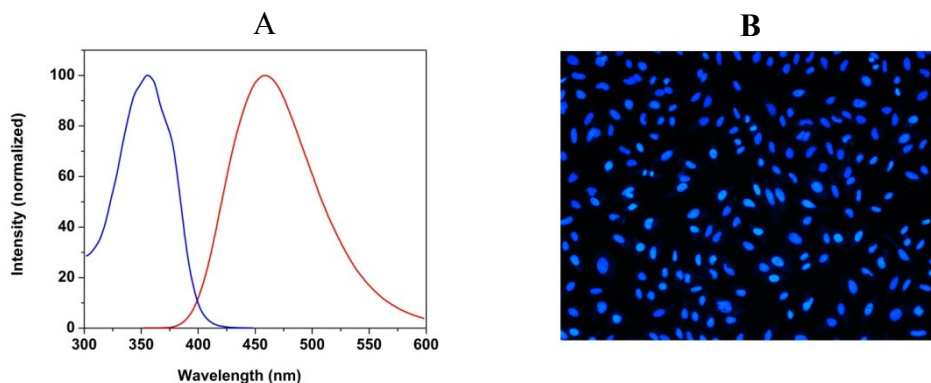
### Biological Applications

Our Nuclear Blue™ DCS1 is a non-fluorescent, DNA-selective and cell impermeant blue fluorescent dye for analyzing DNA content in dead cells. The Nuclear Blue™ DCS1 has its fluorescence significantly enhanced upon binding to double-stranded DNA. It can be used in fluorescence imaging, microplate and flow cytometry applications. This DNA-binding dye can be used for multicolor analysis of dead cells.

### Sample Protocol for Staining Cells

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

1. Add Nuclear Blue™ DCS1 (2 to 10  $\mu$ M) 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. *Optional operation: Carefully wash the cells with PBS before analysis.*



**Figure 1.** A: Excitation and emission spectra for the Nuclear Blue™ DCS1 bound to DNA in TE Buffer. B: Dead cell imaging with Nuclear Blue™ DCS1. Fixed HeLa cells plated on 96-well plates, incubated with Nuclear Blue™ DCS1 2.5  $\mu$ M for 20 minutes and imaged with DAPI channel.

**Disclaimer:** This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact our technical service representative for more information.