CytoALL™ DNA Red 600

Catalog number: 22270
Unit size: 1 mg

Component	Storage	Amount (Cat No. 22270)
CytoALL™ DNA Red 600	Freeze (< -15 °C), Minimize light exposure	1 mg

OVERVIEW

The common fluorescent DNA probes (such as DAPI, Hoechst or SYBR® Green) predominantly stains the DNAs in nuclei. There is a unmet need for a universal DNA probe that can stain the total cellular DNAs in live cells. CytoALL™ DNA Red 600 has been developed to stain all the DNAs in live cells. CytoALL™ DNA Red 600 is a DNA-selective, cell permeable dye that stains all DNA contents including nuclei and mitochondria in live cells. The staining is simple and robust. It only requires a single step of incubating cells in the presence of CytoALL™ DNA Red 600. The cells can be viewed with a TRITC filter set, allowing it to multiplex with various other fluorescent imaging probes. AAT Bioquest also offers a variety of DNA probes for staining nuclei (such as Nuclear Blue™, Nuclear Green™ and Nuclear Red™) and MitoDNA™ for selective staining of mitochondrial DNAs (mtDNA).

AT A GLANCE

Important Note

Paragraph content

Protocol Summary

1. Prepare the cells in growth medium.
2. Stain the cells with CytoALL™ DNA Red 600 working solution.
3. Incubate at 37 °C for 5-15 minutes.
4. Use a fluorescence microscope with a Cy3 filter set to monitor the fluorescence intensity.

KEY PARAMETERS

Fluorescence microscope

Emission	Cy3 Filter Set
Excitation	Cy3 Filter Set
Recommended plate	Black wall/clear bottom

PREPARATION OF STOCK SOLUTIONS

Unless otherwise noted, all unused stock solutions should be divided into single-use aliquots and stored at -20 °C after preparation. Avoid repeated freeze-thaw cycles

CytoALL™ DNA Red 600 Stock Solution

1. Prepare a 5 to 10 mM CytoALL™ DNA Red 600 stock solution in DMSO. For example, to make a 10 mM stock solution add 245 µL of DMSO to the vial of CytoALL™ DNA Red 600, and mix well.

   Note: Prepare single-use aliquots of the CytoALL™ DNA Red 600 stock solution and store at ≤ -20°C, protected from light. Avoid repeated freeze-thaw cycles.

PREPARATION OF WORKING SOLUTION

CytoALL™ DNA Red 600 Working Solution

1. Prepare a 10 to 20 µM working solution by diluting the CytoALL™ DNA Red 600 stock solution with Hanks solution containing 20 mM Hepes buffer (HHBS).

   Note: For optimal results, use this solution within a few hours of preparation.

   Note: Protect the CytoALL™ DNA Red 600 working solution from light by covering it with foil or storing it in a dark place.

SAMPLE EXPERIMENTAL PROTOCOL

1. Plate cells as desired in a 96-well black wall-clear bottom plate.
2. Remove the cell culture medium and add 100 µL of CytoALL™ DNA Red 600 working solution to the cells.
3. Incubate the cells at 37 ° C for 5 to 15 minutes, protected from light.

   Note: The optimal concentration and incubation time for CytoALL™ DNA Red 600 vary depending on the cell line. It is necessary to test different concentrations to determine the most effective dose for your specific cell line.

4. Remove the dye working solution and wash the cells twice with HHBS buffer.
5. Add HHBS buffer and analyze the cells with the fluorescence microscope using a Cy3 filter set.

EXAMPLE DATA ANALYSIS AND FIGURES

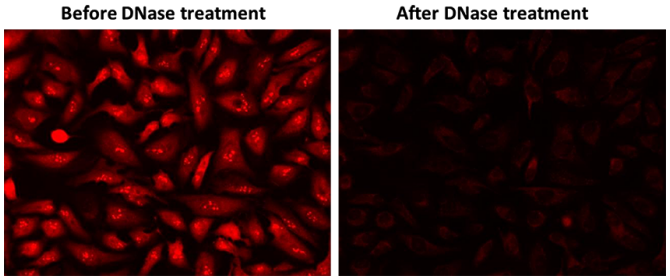

Figure 1. The fluorescence response of CytoALL™ DNA Red 600 (20 µM) was evaluated in HeLa cells before and after treatment with DNase (2 units/reaction) at 37°C for 1 hour. Fluorescence intensities were monitored using a fluorescence microscope equipped with a Cy3 filter.

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.