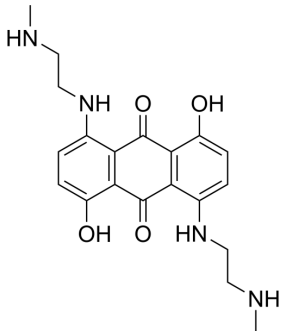
DRAQ5

Cat. No.:	HY-D1742
CAS No.:	254098-36-7
Molecular Formula:	$C_{20}H_{24}N_4O_4$
Molecular Weight:	384.43
Target:	Fluorescent Dye; DNA Stain
Pathway:	Others; Cell Cycle/DNA Damage
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	DRAQ5 is a novel cell permeant and far red-fluorescing DNA probe. DRAQ5 excites at a wavelength of 647 nm, close to the Ex, and produces a fluorescence spectrum extending from 665 nm out to beyond 780 nm wavelengths. DRAQ5 fluorescence reflects cellular DNA content. DRAQ5 can be used in combination with FITC and RPE-labelled antibodies, without the need for fluorescence compensation[1].
In Vitro	Mammalian cell in full culture medium staining methods[2]: (1) Cell planking: Digestive separation of cells and resuspend in complete medium to a concentration of 2-4 × 10^5 cells/ml. Note: Attached cell cultures (e.g., coverslip cultures or chambered wells) can be stained in a 1-2-ml staining volume overlayering a 4-cm^2 surface area. (2) Prepare staining solution: Add 4 µl of 5 mM DRAQ5 acidified stock per ml culture medium (20 µM final). Note: Nuclear discrimination is achievable at 2.5 to 5 µM, and it is unlikely that concentrations >30 µM would be required. (3) Fluorescence staining: Incubate 5 to 15 min at 37°C. Note: Overstaining cannot occur. (4)Wash (optional): Centrifuge cells 3 to 5 min at 800 × g, 37°C. Discard supernatant and resuspend in complete medium with 10 mM HEPES (HY-D0857) at 4 × 10^5 cells/ml. (5) For flow cytometry: Use conventional pulse analysis for doublet discrimination and analyze parameters using appropriate software. (6) For laser scanning microscopy: Collect fluorescence images using a 695 nm long-pass filter. Fixed cells staining methods[2]: (1) Fixed cells:Use 4% paraformaldehyde in PBS for 30 min with resuspension in an aqueous buffer (e.g., PBS). (2) Fluorescence staining: similar concentrations of dye and similar incubation conditions can be used as for live cells. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Smith PJ, et al. A novel cell permeant and far red-fluorescing DNA probe, DRAQ5, for blood cell discrimination by flow cytometry. J Immunol Methods. 1999 Oct 29;229(1-2):131-9.

[2]. Smith PJ, et al. DRAQ5 labeling of nuclear DNA in live and fixed cells. Curr Protoc Cytom. 2004 May;Chapter 7:Unit 7.25.

Caution: Product has not been fully validated for medical applications. For research use only.

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