DRAQ7® Fluorescent Probe

DRAQ5®和 DRAQ7®为北京富百科生物技术有限公司注册商标，未经授权严禁使用！

性质：

1. **规格：0.3mM** 0.5mL, 1mL

2. **参数：** MW= 412.49； Wavelength: Ex/Em= 633/695nm

3. **储存：** 4 ℃避光保存 2 年

4. **产品描述：**

DRAQ7® 是一种远红光的 DNA 染料，能够染色死亡和透化细胞中的细胞核。由于它对活细胞是非渗透性的， 所以可用于区分活细胞和死细胞，是研究死亡或膜受损细胞 的理想工具，并且可以快速染色死亡或透化细胞的 dsDNA /细胞核。它可用于大多数细胞类型，真核和原核生物：哺乳 动物，细菌，寄生虫，植物等，可与活细胞染料共同使用， 并用于 siRNA 研究和其他动态活性检测。

DRAQ7® 是 PI 和 7-AAD 的理想替代品，因为它不受紫外线的激发，并且与 PE 以及 PE 同系物没有发射重叠，可与 FITC、PE 和其他紫色染料结合用于多色分析，无需洗涤或 RNase 处理。DRAQ7®可用流式细胞仪，激光扫描细胞仪和 共聚焦显微镜进行检测 DRAQ7® 在 647nm 处被最佳激发，使用流式细胞仪的 时候可以使用 488nm, 514nm 和 568 nm 波长激发。对于成像显微术，建议使用 633 或 647 nm 的光源进行激发。由于它的发射和激发波长范围很宽，不建议将 DRAQ7®与其他可被 488 或 633 nm 激发的远红光荧光染料联用。

5. **操作说明**

①. 准备不含有叠氮化钠的 PBS 缓冲液。

②. 固定细胞：4% 多聚甲醛的 PBS 在室温下固定 15 min。

③. 用 PBS 冲洗细胞两次。

④ 将细胞在 0.5% Triton X-100 的 PBS 中室温透化 10 min。

⑤ 用 PBS 冲洗细胞两次。

⑥可选：根据您的标准进行免疫荧光染色操作。

⑦根据不同细胞将 DRAQ7® 稀释至最佳浓度，室温染色 5-30 min（37℃ 染色更快，可能需要更短的染色时间）。 建议稀释倍数在 1：15 至 1：200 之间。

⑧. 用荧光显微镜，流式细胞仪等检测远红外细胞核染色。

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DRAQ7 Fluorescent Probe, 0.3mM, 1mL

MW~413 Da, Wavelength: Ex/Em= 646/697nm

Features

- Stable at room temperature
- Rapid staining of dead cells without wash steps
- No UV excitation and no emission spectral overlap with PE

Storage&Shipping:

Store undiluted at 4℃ and protected from prolonged exposure to light. Do not freeze.Product is shipped at ambient temperature.

Discription：

DRAQ7® is a bright, easy-to-use far-red fluorescent DNA dye. DRAQ7® Dye is a membrane-impermeable dye that rapidly stains the double-stranded DNA (dsDNA) of dead or fixed cells for cell cycle analysis by DNA content, nuclear visualization, or discrimination of nucleated cells from debris or enucleated cells. Because DRAQ7® is impermeable to intact cells, it may also be used as a viability dye. DRAQ7® has excitation maxima at 599/644 nm and emission maxima at 678/697 nm, but can also be sub-optimally excited by the 488 nm. Its emission wavelength maximum is 678 nm, or 694 nm when intercalated with double-stranded DNA.

Recommended Procedure for DNA Staining

1. Staining of Live Cells for Viability Analysis by Flow Cytometry

1.1 Obtain a single cell suspension.

1.2 Resuspend cells in 1X Dulbecco’s Phosphate Buffered Saline (DPBS) or other azide-free buffer containing 1-3 μM DRAQ7®.

a. The optimal concentration of DRAQ7® for viability analysis may vary by cell type. We recommend titrating the reagent for your cell type of interest in early experiments.

b. Additionally, apoptotic cells may stain with variable amounts of DRAQ7®. We recommend co-staining with, eg, our FITC Annexin V if further analysis of apoptotic cells is desired.

1.3 Incubate 5 minutes at room temperature. No wash is necessary prior to analysis.

1.4 Proceed to analysis by flow cytometry.

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2.Staining of Fixed Cells for DNA Content Analysis by Flow Cytometry

2.1. Obtain a single cell suspension.

2.2 Treat cells on ice for 30 minutes with 70–80% ice-cold ethanol. Ethanol fixation typically provides the most resolved histograms.

2.3 Wash cells once with PBS.

2.4 Dilute DRAQ7® to 20 μM in 1X DPBS or other azide-free buffer immediately prior to use.

2.5 Stain cells for 5–15 minutes at a cell density of 0.5E6 cells/mL or less. No further wash is necessary prior to analysis. The optimal cell density and concentration of DRAQ5® for DNA content analysis may vary by cell type. Assay conditions should be optimized in early experiments for best results.

6. Proceed to analysis by flow cytometry.

3. Immunofluorescent Staining of Fixed Cells for Nuclear Visualization

3.1 Fix and permeabilize cells as desired.

3.2 Dilute DRAQ7® solution to 5–20 μM in 1X DPBS or other azide-free buffer immediately prior to use.

3.3 Add DRAQ7® solution to each sample at least 5 minutes before analysis.

3.4 Proceed to imaging. We recommend using a 715LP or longer wavelength filter, though the dye is well-detected in filters typically used to detect Super Fluor. 647 (eg, 660/20 or 692/40).

Note that dsDNA-bound dye will fluoresce brightly in the nucleus and unbound dye may fluoresce dimly in the cytoplasm, allowing segmentation of the cytoplasmic and nuclear compartments.

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