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DAPI, blue fluorescent nucleic acid stain

http://hk.lumiprobe.com/p/dapi-nucleic-acid-stain

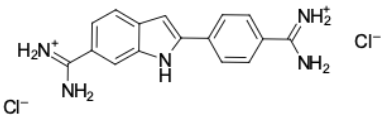
DAPI (4′,6-diamidino-2-phenylindole) is a blue-emitting fluorescent dye that binds strongly to adenine-thymine-rich regions in DNA. It is used extensively in fluorescence microscopy, flow cytometry for chromosome staining and as a nuclear counterstain. DAPI is generally used to stain fixed cells since the dye is membrane impermeant, although the dye can enter live cells when used at high concentrations.

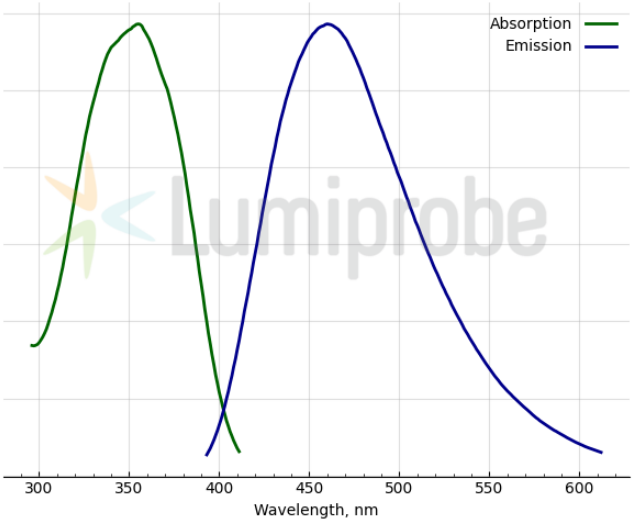
When bound to double-stranded DNA, DAPI exhibits ~20-fold enhancement of fluorescence with an absorption maximum at 355 nm and emission maximum at 460 nm. DAPI also binds to RNA, though it is not as strongly fluorescent. When bound to RNA, its emission spectrum shifts to around 500 nm.

There is a slight fluorescence overlap between DAPI and green-fluorescent molecules like fluorescein and GFP. Use spectral unmixing if extremely precise image analysis is required.

DAPI is several times more sensitive than ethidium bromide for staining DNA in agarose gels. It may be used for photofootprinting DNA and detecting annealed probes in blotting applications by specifically visualizing the double-stranded complex. Also, DAPI staining is a sensitive and specific detection method for mycoplasma.

The working concentration of DAPI for staining eukaryotic cells is usually 1 µg/mL. Still, it depends on the cell type and density, so the exact dilution of the dye should be determined experimentally.





外观:	
分子量:	350.25
CAS 编号:	28718-90-3
分子式:	$C_{16}H_{17}Cl_2N_5$
溶解度:	
质量控制:	
储存条件:	
法律声明:	本產品僅供研究目的提供和銷售。本產品並未經過食品、藥品、醫療器械、化妝品等領域的安全性和效力測試，且未經明示或暗示授權用於其他任何用途，包括但不限於體外診斷、人類或動物用途，以及商業用途。

激发/吸收极大值，纳米:	355
ε, 摩尔吸光系数，cm^{-1}:	28800
发射极大值，纳米:	460