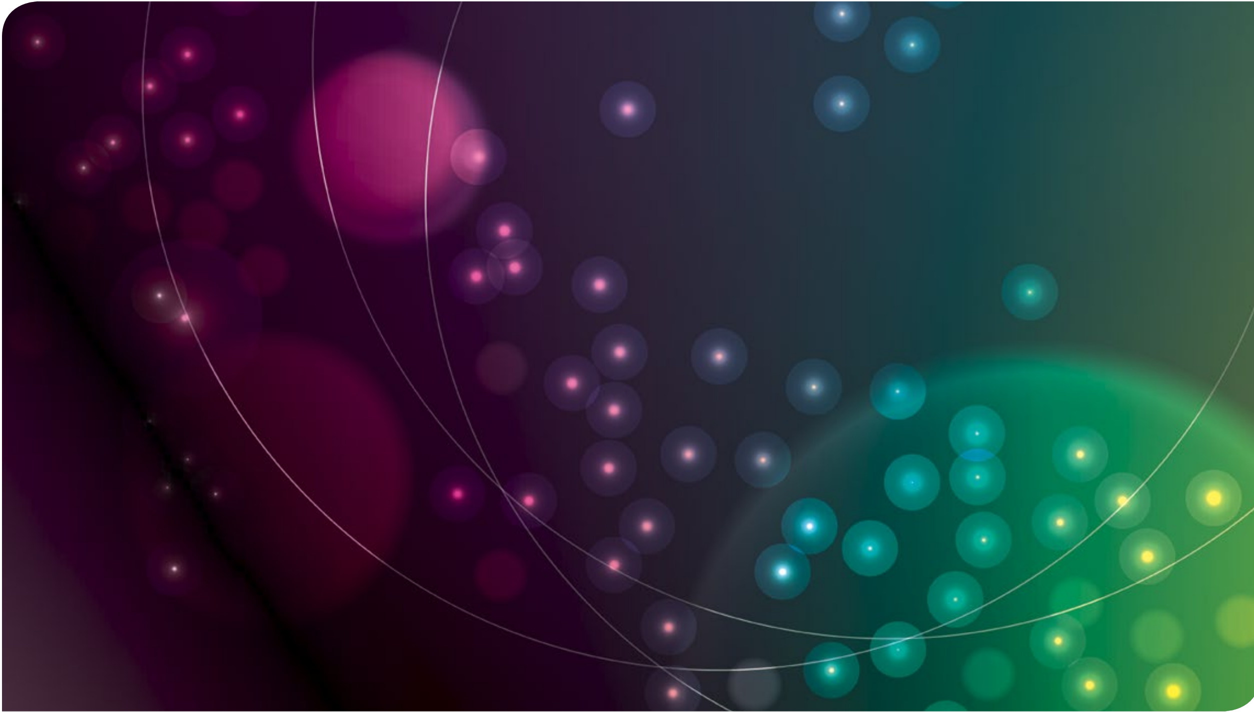


PureBlu™ Nuclear Staining Dyes

Bio-Rad's PureBlu Nuclear Staining Dyes are high-purity formulations of 4',6-diamidino-2-phenylindole dihydrochloride (DAPI) and Hoechst 33342. PureBlu Dyes are packaged in an easy-to-use format and are useful for staining cell nuclei for cell imaging and determining cell viability and quantifying DNA in flow cytometry applications.

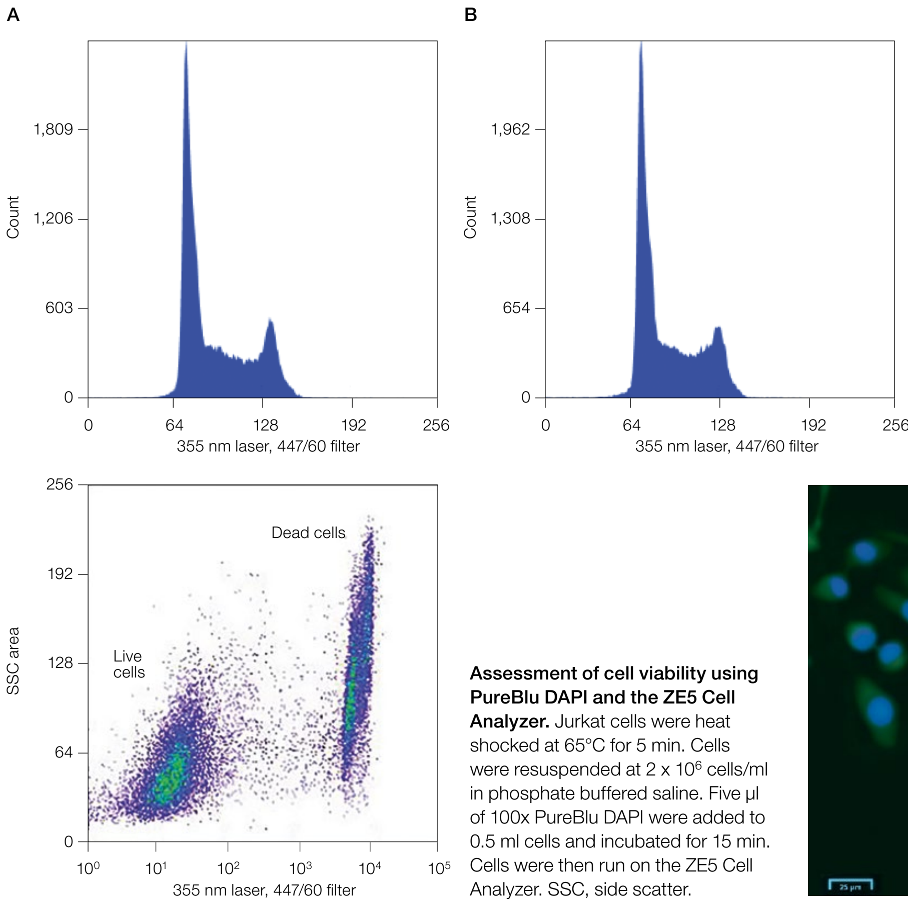
- Both dyes enable quantifiable staining of cell DNA
- Hoechst 33342 has better live cell membrane permeability than DAPI
- DAPI can be used for viability and cell cycle analysis in flow cytometry
- Both dyes have a >95% purity formulation for reliable results

Visit **bio-rad.com/web/PureBlu1** for more information.

Easily Stain Cell Nuclei

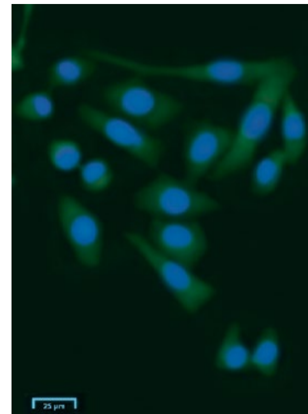
PureBlu Dyes bind with high affinity to the minor groove of AT-rich DNA sequences in eukaryotic and prokaryotic cells in a stoichiometric fashion. As the proportion of dyes is equal to the amount of DNA in the cell, these dyes can be used for flow cytometry cell cycle analysis via quantification of the DNA content. The localization to the cell nuclei also allows for cell counting and identification in imaging applications.

Available as 95% pure compounds, PureBlu DAPI is suggested for fixed cells and PureBlu Hoechst 33342 for live cells. PureBlu DAPI can be used as a viability dye in flow cytometry because the dye amasses in greater quantity in dead cells with a compromised membrane than live cells. Both reagents are compatible with all multicolor cell imaging applications that include the use of an ultraviolet (Hoechst and DAPI) or violet (DAPI) light source.



PureBlu Dyes used for cell cycle analysis on the ZE5™ Cell Analyzer. G0/G1 and G2/M peaks are separated by the S phase. Jurkat cells were fixed in cold 70% ethanol for 2 hr, then washed. The cells were then stained with 0.2 µg/ml of either DAPI (**A**) or Hoechst 33342 (**B**) in buffer containing 0.1% Triton X-100 for 30 min prior to analysis on the ZE5 Cell Analyzer. Samples were gated to remove doublets.

Assessment of cell viability using PureBlu DAPI and the ZE5 Cell Analyzer. Jurkat cells were heat shocked at 65°C for 5 min. Cells were resuspended at 2 x 10^6 cells/ml in phosphate buffered saline. Five µl of 100x PureBlu DAPI were added to 0.5 ml cells and incubated for 15 min. Cells were then run on the ZE5 Cell Analyzer. SSC, side scatter.



PureBlu Dyes for staining the DNA of eukaryotic cells. HeLa cells were transfected with a green fluorescent protein (GFP)–expressing plasmid DNA, stained, and viewed in a six-well dish using a ZOE™ Fluorescent Cell Imager. Merged view of GFP-positive cells counterstained with PureBlu DAPI.

Ordering Information

Catalog Number	Description	Maximum Excitation, nm	Maximum Emission, nm	Optimal Excitation Laser, nm	S3e™ Cell Sorter	ZE5 Cell Analyzer	ZOE Fluorescent Cell Imager
1351303	**PureBlu DAPI***	359	461	355	•	•	•
1351304	**PureBlu Hoechst 33342****	350	461	355		•	•

* Includes 5 x 50 µg vials of DAPI powder.
** Includes 5 x 56 µg vials of Hoechst 33342 powder.

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Bio-Rad Laboratories, Inc.

Life Science Group

Web site *bio-rad.com* ***USA*** *1 800 424 6723* ***Australia*** *61 2 9914 2800* ***Austria*** *43 01 877 89019* ***Belgium*** *32 03 710 53 00* ***Brazil*** *55 11 3065 7550* ***Canada*** *1 905 364 3435* ***China*** *86 21 6169 8500* ***Czech Republic*** *36 01 459 6192* ***Denmark*** *45 04 452 10 00* ***Finland*** *35 08 980 422 00* ***France*** *33 01 479 593 00* ***Germany*** *49 089 3188 4393* ***Hong Kong*** *852 2789 3300* ***Hungary*** *36 01 459 6190* ***India*** *91 124 4029300* ***Israel*** *972 03 963 6050* ***Italy*** *39 02 49486600* ***Japan*** *81 3 6361 7000* ***Korea*** *82 2 3473 4460* ***Mexico*** *52 555 488 7670* ***The Netherlands*** *31 0 318 540 666* ***New Zealand*** *64 9 415 2280* ***Norway*** *47 0 233 841 30* ***Poland*** *36 01 459 6191* ***Portugal*** *351 21 4727717* ***Russia*** *7 495 721 14 04* ***Singapore*** *65 6415 3188* ***South Africa*** *36 01 459 6193* ***Spain*** *34 091 49 06 580* ***Sweden*** *46 08 555 127 00* ***Switzerland*** *41 0617 17 9555* ***Taiwan*** *886 2 2578 7189* ***Thailand*** *66 2 651 8311* ***United Arab Emirates*** *971 4 8187300* ***United Kingdom*** *44 01923 47 1301*

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