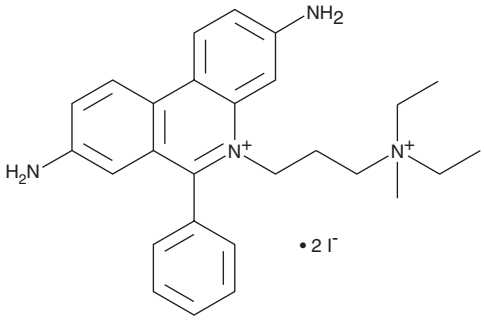
PRODUCT INFORMATION

Propidium Iodide

Item No. 14289

CAS Registry No.:	25535-16-4
Formal Name:	3,8-diamino-5-[3-(diethylmethylammonio)propyl]-6-phenyl-phenanthridinium, diiodide
Synonym:	PI
MF:	$C_{27}H_{34}N_4 \bullet 2I$
FW:	668.4
Purity:	≥90%
UV/Vis.:	λ_{max}: 219, 298, 546 nm
Ex./Em. Max:	488-535/617 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Propidium iodide (PI) is supplied as a crystalline solid. A stock solution may be made by dissolving the PI in the solvent of choice, which should be purged with an inert gas. PI is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of PI in these solvents is approximately 0.2, 2.5, and 3.3 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of PI can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of PI in PBS (pH 7.2) is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

PI is membrane impermeant and generally excluded from viable cells. However, it can easily penetrate dead or damaged cells and as such is commonly used for identifying cell viability in a population or as a counterstain in multicolor fluorescent techniques.[1] It binds to DNA and RNA by intercalating between the bases. PI is excited at 488-535 nm with an emission maximum of 617 nm. This probe is suitable for fluorescence microscopy and flow cytometry.

Reference

1. Coder, D.M. Assessment of cell viability. *Curr. Protoc. Cytom.* 9.2.1-9.2.14 (1997).

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