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## DATASHEET

### Propidium Iodide Staining Solution (1 mg/ml) in water

#### Product overview

<b>Name</b>	Propidium Iodide Staining Solution (1 mg/ml) in water
<b>Cat No</b>	HB0821
<b>Description</b>	Red-fluorescent cell viability stain. 1 mg/ml staining solution in water.
<b>Alternative names</b>	PI
<b>Biological description</b>	<p>Propidium iodide (PI) is a widely used red-fluorescent intercalating agent that binds and labels nucleic acids. This is a 1 mg/ml staining solution.</p> <p>Propidium iodide is membrane impermeant and is therefore frequently used to selectively identify dead cells and is commonly used in flow cytometry to evaluate cell viability.</p> <p>Propidium iodide (PI) is often used in flow cytometry, fluorescent microscopy and confocal laser scanning microscopy applications.</p> <p>Frequently used with <a href="#">Oxazole Yellow (YP1)</a> when staining for apoptotic and necrotic cells as apoptotic cells remain impermeant to propidium iodide but permeable to Oxazole Yellow (YP1).</p> <p>Once bound to the nucleic acids, its fluorescence is enhanced 20- to 30-fold. Wavelength Maxima: Excitation ~535nm, Emission ~617nm</p>
<b>Biological action</b>	Dyes & stains

#### Solubility & Handling

<b>Storage instructions</b>	+4 °C
<b>Handling</b>	Protect from light.
<b>Important</b>	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

#### Chemical Data

<b>Chemical name</b>	2,7-Diamino-9-phenyl-10 (diethylaminopropyl)-phenanthridium iodide methiodide aqueous solution
<b>Molecular Weight</b>	668.39
<b>Molecular Formula</b>	C <sub>27</sub> H <sub>34</sub> I <sub>2</sub> N <sub>4</sub>
<b>CAS Number</b>	25535-16-4
<b>PubChem identifier</b>	104981
<b>SMILES</b>	CC[N+](C)(CC)CCC[N+]=C2C=C(C=CC2=C3C=CC(=CC3=C1C4=CC=CC=C4)N)N.[I-].[I-]
<b>InChiKey</b>	XJMOSONTPMZWPB-UHFFFAOYSA-M
<b>MDL number</b>	MFCD00011921
<b>Appearance</b>	Red/pink solution
<b>Excitation</b>	535 nm
<b>Emission</b>	617 nm

#### References

**The DNA intercalators ethidium bromide and propidium iodide also bind to core histones.**

Banerjee A *et al* (2014) FEBS Open Bio 4

**PubMedID** [24649406](#)

**Analysis of apoptosis by propidium iodide staining and flow cytometry.**

Riccardi C *et al* (2006) Nat Protoc 1(3)

**PubMedID** [17406435](#)

**DNA staining for fluorescence and laser confocal microscopy.**

Suzuki T *et al* (1997) J Histochem Cytochem 45(1)

**PubMedID** [9010468](#)

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