

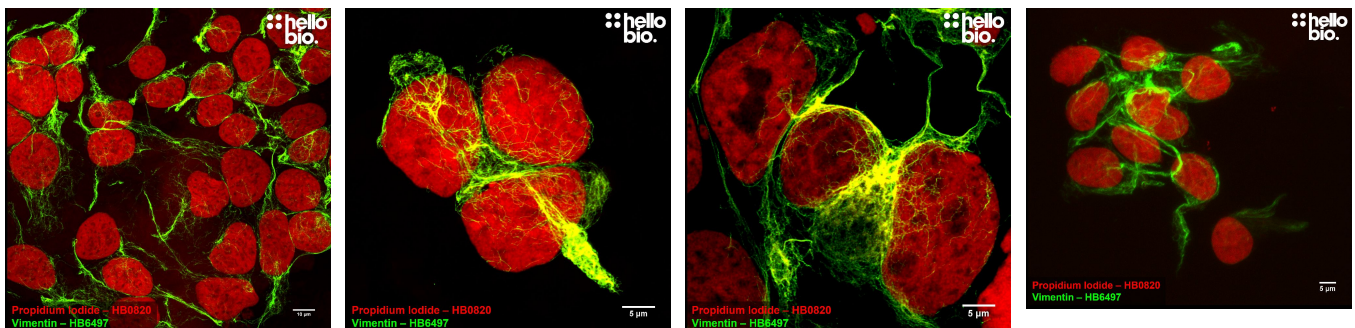
## DATASHEET

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

#### Product overview

<b>Name</b>	Propidium Iodide Staining Solution (1mg/ml) in water
<b>Cat No</b>	HB0821
<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 1mg/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 <b>Oxazole Yellow (YP1)</b> 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
<b>Description</b>	Red-fluorescent cell viability stain. 1mg/ml staining solution in water.

#### Images



#### Biological Data

##### Application notes

##### #Protocol 1: Propidium Iodide counterstaining of HEK293T cells

- HEK293T cells were cultured on coverslips in 10% FBS in DMEM and fixed with 4% PFA. Immunocytochemistry was performed following our **ICC protocol** using an anti-vimentin

- monoclonal antibody at 1µg/ml.
- Prodidium iodide working solution was prepared consisting of 1µg/ml Propidium Iodide and 10µg/ml RNase A and incubated with cells for 30 minutes at room temperature.
- Following washing with PBS, coverslips were mounted and imaged using a confocal microscope using either a 532nm or 514nm laser for excitation

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## Solubility & Handling

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

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## Chemical Data

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

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## 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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