

Hello Bio, Inc.  
304 Wall St., Princeton, NJ 08540 USA

T. 609-683-7500  
F. 609-228-4994

customercare-usa@hellobio.com



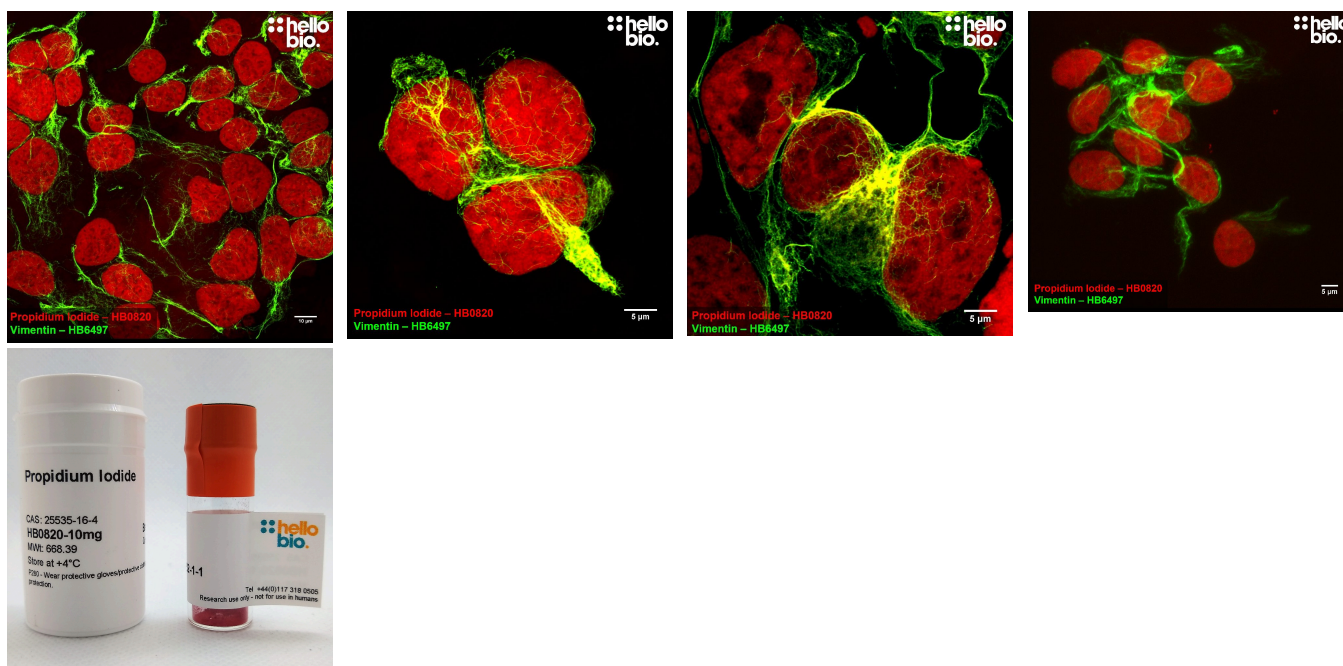
## DATASHEET

### Propidium Iodide

#### Product overview

<b>Name</b>	Propidium Iodide
<b>Cat No</b>	HB0820
<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.</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>Purity</b>	>97%
<b>Description</b>	Red-fluorescent cell viability stain

#### Images



#### Biological Data

- 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 1 µg/ml.
- Propidium iodide working solution was prepared consisting of 1 µg/ml Propidium Iodide and 10 µg/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

### Solubility overview

Soluble in water (5 mM)

### 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

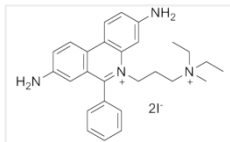
### Chemical name

2,7-Diamino-9-phenyl-10 (diethylaminopropyl)-phenanthridium iodide methiodide

### Molecular Weight

668.39

### Chemical structure



### 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

CC[N+](C)(CC)CCC[N+]1=C2C=C(C=CC2=C3C=CC(=CC3=C1C4=CC=CC=C4)N)N.[I-].[I-]

### InChIKey

XJMOSONTMPZWPB-UHFFFAOYSA-M

### MDL number

MFCD00011921

### Appearance

Purple solid

### Excitation

535nm

### Emission

617nm

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## References

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

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

PubMedID

[17406435](#)

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

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

PubMedID

[24649406](#)

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

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

PubMedID

[9010468](#)

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