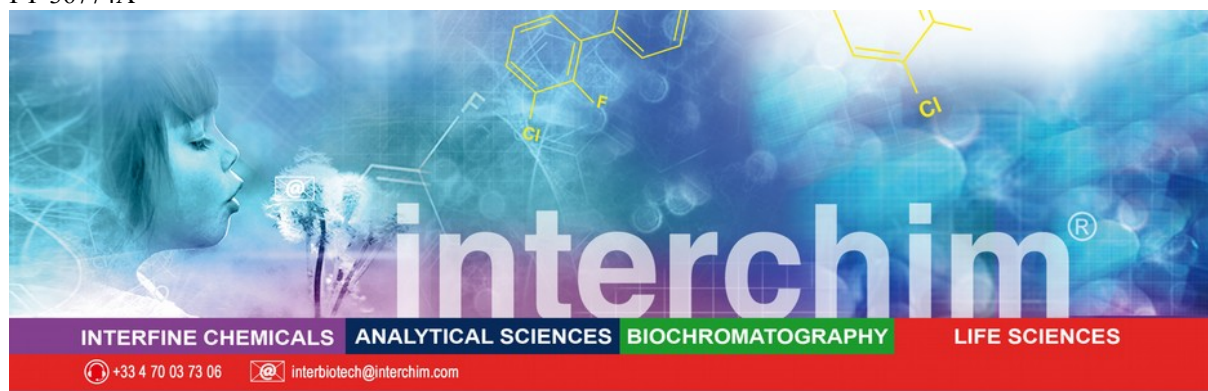


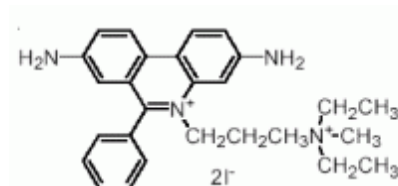
FT-36774A



Propidium Iodide

Product Information

Name :	Propidium Iodide (PI)
Catalog Number :	FP-31238B, 100 mg FP-R1345A, 25mg (FluoProbes pure grade) FP-36774A, 10 ml at 1 mg/ml in water
Structure :	CAS: 25535-16-4; C ₂₇ H ₃₄ I ₂ N ₄
Molecular Weight :	MW= 668.41
Solubility:	Water or DMSO
Absorption / Emission :	$\lambda_{exc}/\lambda_{em}$ (no DNA, water) = 493 / 636 nm $\lambda_{exc}/\lambda_{em}$ (DNA bound) = 535 / 617 nm
EC (M⁻¹ cm⁻¹) :	(no DNA, water) = 5 900 (DNA bound) = 5 400



Storage: +4°C. Protect from light and moisture.

First Aid: Potentially harmful. Avoid prolonged or repeated exposure. Avoid getting in eyes, on skin, or on clothing. Wash thoroughly after handling. If eye or skin contact occurs, wash affected areas with plenty of water for 15 minutes and seek medical advice. In case of inhaling or swallowing, move individual to fresh air and seek medical advice immediately.

Introduction

Propidium Iodide is a membrane-impermeant nucleic acid intercalator. The dye is commonly used to selectively stain dead cells in a cell population and also used as a nuclear or chromosome counterstain in multicolour fluorescent imaging with fluorescein. However it does require cells to be fixed or permeabilised and therefore only non-viable.

PI also stains double-stranded RNA and this should be removed with ribonuclease

It is excited by 488nm light and can be used on most common flow cytometers. It is used also in fluorescence microscopy, confocal laser-scanning microscopy and fluorometry (excited with mercury- or xenon arc lamps or with the argon-ion laser).

Directions for use

Handling and Storage

Propidium iodide is dissolved in DMSO at 0.5-1 mg/ml.

FT-36774A

Please note that products with recommended storage at +4°C, may ship at ambient temperature. This will not affect product performance. When you receive the product, place it under the recommended storage conditions.

Guidelines for use – Propidium Iodide DNA Staining Procedure for flow cytometer [U](#)

1. Prepare a cell suspension : add 5ml 90% COLD EtOH dropwise on 2×10^6 cells (2 ml suspension)
2. Fix at least 30 minutes at RT. Store at +4° C until ready to stain.
3. Prepare a stock propidium iodide at 500 µg/ml in H₂O. Then a working solution - 1:10 dilution with Tris buffer.
4. Spin cells out of fix. Resuspend pellet.
5. Add 1ml of diluted propidium iodide. 30 minutes before FCM analysis, add 100µl of 1mg/ml Rnase. Incubate at 37° C. Samples are ready for FCM analysis.

Guidelines for use – Staining cells with Propidium Iodide for fluorescent microscopy [U](#)

1. The cells are fixed according an appropriate procedure.
2. Add 100 µl of 500 ng/ml Propidium Iodide and gently break up the cell pellet.
3. To visualize the cells, make sure the cells are in suspension (gently break up the cell pellets in necessary) and place 20 µl of the suspension on a microscope slide and add a coverslip.
4. Analyse the cells under a fluorescent microscope.

Other protocol may found in the literature.

Related products

- Annexin V - FluoProbes® 488, FP-BH9390
- Calcein AM, FP-895514
- EdU cell proliferation assay, FP-MM982A
- IDetect™ FISH probes

References

- **Belloc F., et al.**, « A flow cytometric method using Hoechst 33342 and propidium iodide for simultaneous cell cycle analysis and apoptosis determination in unfixed cells », *Cytometry*, **17**, 59 (1994)
- **Crompton T., et al.**, « Propidium iodide staining correlates with the extent of DNA degradation in isolated nuclei », *BBRC*, **183**, 532 (1992)
- **Eray M., et al** « Flow cytometric analysis of apoptotic subpopulations with a combination of annexin V-FITC, propidium iodide, and SYTO 17 », *Cytometry*, **43**, 134 (2001)
- **Honda O., et al**, « Assessment of secondary necrosis of Jurkat cells using a new microscopic system and double staining method with annexin V and propidium iodide », *Int. J. Oncol.*, **16**, 283 (2000)
- **Vermes I., et al.**, « A novel assay for apoptosis. Flow cytometric detection of phosphatidylserine expression on early apoptotic cells using fluorescein labelled Annexin V », *J. Immunol. Meth.*, **184**, 39 (1995)

Ordering information

Catalog size quantities and prices may be found at <http://www.interchim.com>

Please inquire for higher quantities (availability, shipment conditions).

For any information, please ask : FluoProbes® / Interchim; Hotline : +33(0)4 70 03 73 06

Disclaimer : Materials from FluoProbes® are sold **for research use only**, and are not intended for food, drug, household, or cosmetic use. FluoProbes® is not liable for any damage resulting from handling or contact with this product. R08vb