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DATASHEET

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

Product overview

Name Cat No **Alternative names Biological description** Propidium Iodide Staining Solution (1mg/ml) in water

HB0821

Propidium iodide (PI) is a widely used red-fluorescent intercalating agent that binds and labels nucleic acids. This is a 1mg/ml staining solution.

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.

Propidium iodide (PI) is often used in flow cytometry, fluorescent microscopy and confocal laser scanning microscopy applications.

Frequently used with Oxazole Yellow (YP1) when staining for apoptotic and necrotic cells as apoptotic cells remain impermeant to propidium iodide but permeable to Oxazole Yellow (YP1).

Once bound to the nucleic acids, its fluorescence is enhanced 20- to 30-fold. Wavelength Maxima:

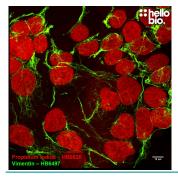
Excitation ~535nm, Emission ~617nm

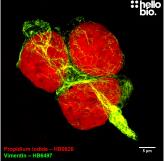
Dyes & stains

Red-fluorescent cell viability stain. 1mg/ml staining solution in water. Description

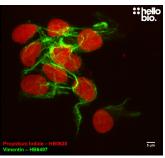
Images

Biological action









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

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

Chemical Data

Chemical name 2,7-Diamino-9-phenyl-10 (diethylaminopropyl)-phenanthridium iodide methiodide aqueous solution

Molecular Weight668.39Molecular Formula $C_{27}H_{34}I_2N_4$ CAS Number25535-16-4PubChem identifier104981

InChiKey XJMOSONTPMZWPB-UHFFFAOYSA-M

MDL number MFCD00011921 Appearance Red/pink solution

Excitation 535 nm **Emission** 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