

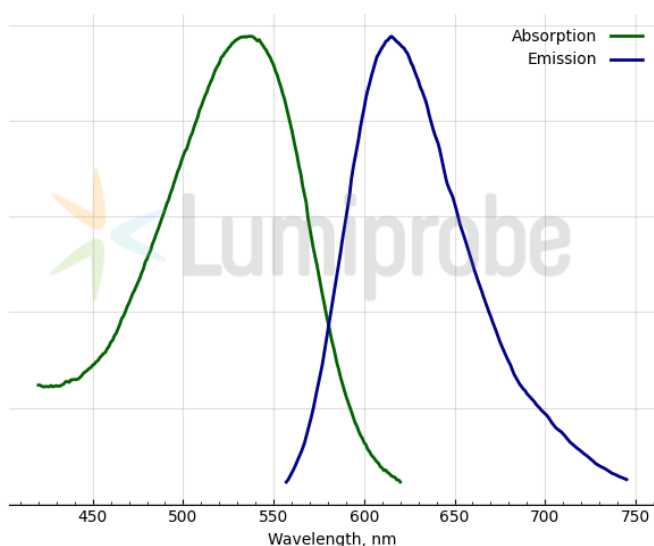
## Propidium Iodide

<http://www.lumiprobe.com/p/propidium-iodide>

Propidium iodide (PI) is a plasma membrane-impermeable intercalating DNA stain that allows discrimination between necrotic, apoptotic, and healthy cell populations based on membrane integrity. After binding to DNA, the dye emits an orange-red channel with an absorption maximum at 535 nm and an emission maximum at 617 nm. The quantum yield of the complex PI with DNA is 20-30 times higher than the quantum yield of free dye.

PI also binds to RNA, thus a pre-treatment with nucleases is required to distinguish between RNA and DNA staining. PI is also widely used in fluorescent staining and imaging of plant cell walls.

We offer Propidium iodide in a solid form and 0.1 mg/ml aqueous solution. The aqueous PI solution is a component of [Annexin V-AF 488 Apoptotic Cell Detection Kit](#).



**Absorption and emission spectra of Propidium Iodide (DNA-dye complex)**

### General properties

Appearance:	dark crystals or orange/red solution
Molecular weight:	668.41
CAS number:	25535-16-4
Molecular formula:	$C_{27}H_{34}I_2N_4$
IUPAC name:	3,8-diamino-5-(3-(diethyl(methyl)ammonio)propyl)-6-phenylphenanthridin-5-ium iodide
Solubility:	poor in water, good in DMSO
Quality control:	NMR $^1H$ and HPLC-MS (95+%)
Storage conditions:	24 months after receipt at $-20^{\circ}C$ in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate.
Legal statement:	Product is offered and sold for research purposes only. Product is not tested for safety and efficacy in food, drug, medical device, cosmetic, no express or implied authorization to use for any other purpose, including, without limitation, in vitro diagnostic purposes, for humans or animals or for commercial purposes.

### Spectral properties

Excitation/absorption maximum, nm:	537 (complex)
Emission maximum, nm:	616 (complex)