

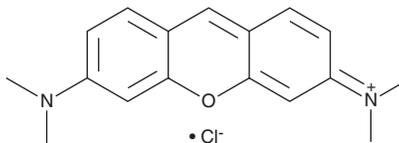
# PRODUCT INFORMATION



## Pyronin Y

Item No. 14488

**CAS Registry No.:** 92-32-0  
**Formal Name:** 3,6-bis(dimethylamino)-xanthylium, monochloride  
**Synonym:** C.I. 45005  
**MF:** C<sub>17</sub>H<sub>19</sub>N<sub>2</sub>O • Cl  
**FW:** 302.8  
**Purity:** ≥95%  
**Ex./Em. Max:** 540-550/560-580 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Pyronin Y is supplied as a crystalline solid. A stock solution may be made by dissolving the pyronin Y in the solvent of choice. Pyronin Y is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of pyronin Y in these solvents is approximately 10 and 3 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of pyronin Y can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of pyronin Y in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Pyronin Y is a fluorescent probe which stains double stranded RNA in living or fixed cells as well as in tissues.<sup>1,2</sup> When used in living cell preparations, it is commonly combined with 50-100 μM verapamil to prevent efflux of the dye. It has been used to ascertain the cell cycle state of stem cells and is amenable to flow cytometry.<sup>3,4</sup> Maximum excitation is at 540-550 nm, with maximum emission at 560-580 nm.

### References

1. Andrews, L.M., Jones, M.R., Digman, M.A., *et al.* Spectral phasor analysis of pyronin Y labeled RNA microenvironments in living cells. *Biomed. Opt. Express* **4**(1), 171-177 (2013).
2. Mohtasham, N., Mahdavi-Shahri, N., Salehinejad, J., *et al.* Detection of nucleoproteins in squamous cell carcinoma, and dysplastic and normal mucosa in the oral cavity by methyl green-pyronin staining. *J. Oral. Sci.* **52**(2), 239-243 (2010).
3. Challen, G.A., Boles, N., Lin, K.K.L., *et al.* Mouse hematopoietic stem cell identification and analysis. *Cytometry A* **75**(1), 14-24 (2013).
4. Tanke, H.J., Rothbarth, P.H., Vossen, J.M., *et al.* Flow cytometry of reticulocytes applied to clinical hematology. *Blood* **61**(6), 1091-1097 (1983).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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