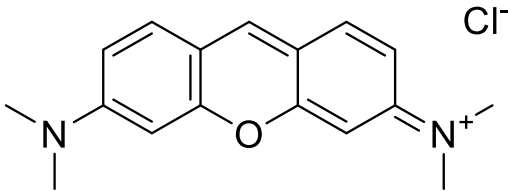


Product data sheet



| | | |
|---|---|--|
| MedKoo Cat#: 592290 Name: Pyronin Y CAS#: 92-32-0 Chemical Formula: C ₁₇ H ₁₉ ClN ₂ O Molecular Weight: 302.80 | |  |
| Product supplied as: | Powder | |
| Purity (by HPLC): | ≥ 98% | |
| Shipping conditions | Ambient temperature | |
| Storage conditions: | Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks. | |

1. Product description:

Pyronin Y is a Xanthene dye used as a bacterial and biological stain.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

| Solvent | Max Conc. mg/mL | Max Conc. mM |
|---------|-----------------|--------------|
| DMSO | 25 | 82.56 |
| Water | 4 | 13.21 |

4. Stock solution preparation table:

| Concentration / Solvent Volume / Mass | 1 mg | 5 mg | 10 mg |
|---------------------------------------|---------|----------|----------|
| 1 mM | 3.30 mL | 16.51 mL | 33.03 mL |
| 5 mM | 0.66 mL | 3.30 mL | 6.61 mL |
| 10 mM | 0.33 mL | 1.65 mL | 3.30 mL |
| 50 mM | 0.07 mL | 0.33 mL | 0.66 mL |

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

- Salci A, Toprak M. Spectroscopic investigations on the binding of Pyronin Y to human serum albumin. J Biomol Struct Dyn. 2017 Jan;35(1):8-16. doi: 10.1080/07391102.2015.1128357. Epub 2016 Feb 17. PMID: 26646531.
- Traganos F, Crissman HA, Darzynkiewicz Z. Staining with pyronin Y detects changes in conformation of RNA during mitosis and hyperthermia of CHO cells. Exp Cell Res. 1988 Dec;179(2):535-44. doi: 10.1016/0014-4827(88)90291-1. PMID: 2461311.

In vivo study

- Hüttmann A, Liu SL, Boyd AW, Li CL. Functional heterogeneity within rhodamine123(lo) Hoechst33342(lo/sp) primitive hemopoietic stem cells revealed by pyronin Y. Exp Hematol. 2001 Sep;29(9):1109-16. doi: 10.1016/s0301-472x(01)00684-1. PMID: 11532352.

7. Bioactivity

Biological target:

Pyronin Y is a dye.

In vitro activity

In this study, pyronin Y was used as a staining agent for cellular RNA in Chinese hamster ovary (CHO) cells. Pyronin Y was used to assess the stainability of RNA in different cellular conditions, such as mitosis (M), G2 phase, and interphase cells exposed to

Product data sheet



hyperthermia. Pyronin Y was used to as a sensitive probe to investigate the effects of mitosis and hyperthermia on the stainability of RNA in CHO cells.

Reference: Exp Cell Res. 1988 Dec;179(2):535-44. <https://pubmed.ncbi.nlm.nih.gov/2461311/>

In vivo activity

Pyronin assessed primitive hematopoietic stem cells (PHSC) during G(0) and G(1). It differentiated the Rh(lo)Lin(-)Kit(+)Sca-1(+) PHSC subset from more mature cells. Further, it revealed diverse functionality within the Rh(lo)Ho(lo/sp)Lin(-)Sca-1(+) PHSC group, with PY(lo)Rh(lo)Ho(lo/sp) PHSC having a higher competitive repopulating unit (CRU) frequency than PY(hi) PHSC at G(1). Pyronin showed dose-dependent cytotoxicity, impacting non-early hematopoietic cells while sparing the early HSC compartment.

Reference: Exp Hematol. 2001 Sep;29(9):1109-16. <https://pubmed.ncbi.nlm.nih.gov/11532352/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.