

**Product Name:** DA ZP1

**Catalog No.:** 7444

**Batch No.:** 1

CAS Number: 1816254-69-9

IUPAC Name: 3',6'-bis(Acetyloxy)-4',5'-bis[[bis(2-pyridinylmethyl)amino]methyl]-2',7'-dichlorospiro[isobenzofuran-1(3*H*),9'-[9*H*]xanthen]-3-one

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>50</sub>H<sub>40</sub>Cl<sub>2</sub>N<sub>6</sub>O<sub>7</sub>·½H<sub>2</sub>O

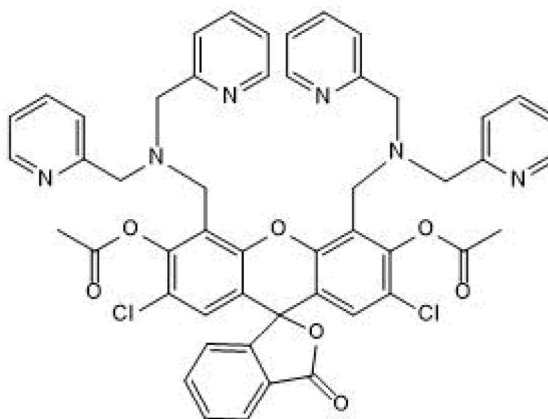
**Batch Molecular Weight:** 916.82

**Physical Appearance:** Pink solid

**Solubility:** DMSO to 2 mM

**Storage:** Store at -20°C

**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 90.1% purity at 210 nm

**<sup>1</sup>H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	65.5	4.51	9.17
Found	64.56	4.38	8.81

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**Description:**

DA ZP1 (diacetylated Zinpyr1) is a fluorogenic Zn(II) sensor ( $K_d$  Zn<sup>2+</sup> = 0.6 nM). It can be used to image and isolate pancreatic  $\beta$ -cells and  $\beta$ -like cells in vitro. Used to purify live stem cell-derived  $\beta$ -like cells. It can image transplanted islet grafts and endogenous mouse islets in vivo. DA ZP1 is non-fluorescent in the absence of Zn(II) ions but its binding with Zn(II) promotes hydrolytic cleavage of the acetyl groups, generating a strong fluorescent signal. Excitation and emission maxima ( $\lambda$ ) are 490 nm and 522 nm, respectively.

**Physical and Chemical Properties:**

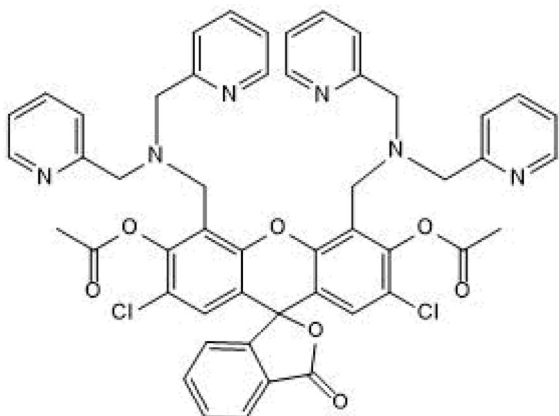
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Batch Molecular Weight: 916.82

Physical Appearance: Pink solid

**Minimum Purity:** ≥90%

**Batch Molecular Structure:**



**References:**

**Kahraman et al** (2021) Harnessing reaction-based probes to preferentially target pancreatic  $\beta$ -cells and  $\beta$ -like cells. *Life Sci.Alliance* **4** e202000840. PMID: 33514654.

**Zastrow et al** (2016) Reaction-based probes for imaging mobile zinc in live cells and tissues. *ACS Sens.* **32** 32. PMID: 26878065 .

**Storage:** Store at -20°C

**CAUTION** - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

**Solubility & Usage Info:**

DMSO to 2 mM

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. \*Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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