

## Certificate of Analysis

**Product Name:** DR 2313

**Catalog No.:** 2496

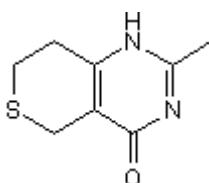
**Batch No.:** 1

CAS Number: 284028-90-6

IUPAC Name: 1,5,7,8-Tetrahydro-2-methyl-4*H*-thiopyrano[4,3-*d*]pyrimidin-4-one

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>8</sub>H<sub>10</sub>N<sub>2</sub>OS  
**Batch Molecular Weight:** 182.24  
**Physical Appearance:** White solid  
**Solubility:** water to 40 mM  
**Storage:** Store at +4°C  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.25 (Dichloromethane:Methanol [9:1])  
**Melting Point:** Between 222 - 223°C  
**HPLC:** Shows >99.1% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**<sup>13</sup>C NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	52.73	5.53	15.37
Found	52.83	5.47	15.17

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

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**Description:**

Competitive inhibitor of poly(ADP-ribose) polymerase (PARP) (IC<sub>50</sub> values are 0.20 and 0.24 μM for PARP-1 and PARP-2 respectively). Neuroprotective; reduces neuronal cell death in models of cerebral ischemia in vivo and in vitro. Brain penetrant.

**Physical and Chemical Properties:**

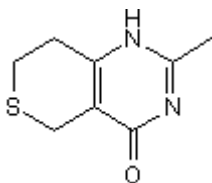
Batch Molecular Formula: C<sub>8</sub>H<sub>10</sub>N<sub>2</sub>OS

Batch Molecular Weight: 182.24

Physical Appearance: White solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**Storage:** Store at +4°C

**Solubility & Usage Info:**

water to 40 mM

When purchased as a 1mg unit, this product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

**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. Our standard recommendations are:

**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.

**References:**

**Nakajima et al** (2005) A newly synthesized poly(ADP-ribose) polymerase inhibitor, DR2313 [2-Methyl-3,5,7,8-tetrahydrothiopyrano[4,3-*d*]pyrimidine-4-one]: pharmacological profiles, neuroprotective effects, and therapeutic time window in cerebral ischemia in rats. *J.Pharmacol.Exp.Ther.* **312** 472. PMID: 15466246.

**Jagtap and Szabo** (2005) Poly(ADP-ribose) polymerase and the therapeutic effects of its inhibitors. *Nat.Rev.Drug Discov.* **4** 421. PMID: 15864271.

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