

**Product Name:** (D)-(+)-Neopterin

**Catalog No.:** 4656

**Batch No.:** 2

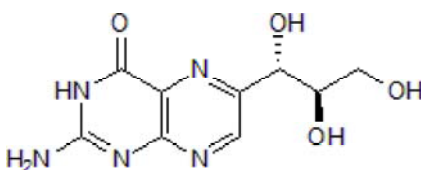
CAS Number: 2009-64-5

EC Number: 217-924-7

IUPAC Name: 2-Amino-6-[(1S,2R)-1,2,3-trihydroxypropyl]-4(3H)-pteridinone

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>9</sub>H<sub>11</sub>N<sub>5</sub>O<sub>4</sub>·¼H<sub>2</sub>O  
**Batch Molecular Weight:** 257.71  
**Physical Appearance:** White solid  
**Solubility:** DMSO to 20 mM with gentle warming  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 99.0% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Optical Rotation:** [α]<sub>D</sub> = +56.9 (Concentration = 0.3, Solvent = 0.1N HCl)  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	41.94	4.5	27.17
Found	41.86	4.2	27.35

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

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**Description:**

Precursor of biopterin synthesis. Synthesized in response to interferon- $\gamma$  stimulation; used as a marker of T helper cell-induced immune activation. Also an indicator of oxidative stress; modulates the effects of reactive oxygen species (ROS).

**Physical and Chemical Properties:**

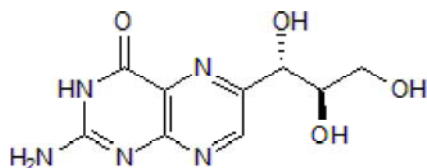
Batch Molecular Formula: C<sub>9</sub>H<sub>11</sub>N<sub>5</sub>O<sub>4</sub>· $\frac{1}{4}$ H<sub>2</sub>O

Batch Molecular Weight: 257.71

Physical Appearance: White solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**Storage:** Store at -20°C

**Solubility & Usage Info:**

DMSO to 20 mM with gentle warming

**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:**

**Murr et al** (2002) Neopterin as a marker for immune system activation. *Curr. Drug Metab.* **3** 175. PMID: 12003349.

**Huber et al** (1984) Immune response-associated production of neopterin. *J. Exp. Med.* **160** 310. PMID: 6429267.

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