

**Product Name:** SD 208

**Catalog No.:** 3269

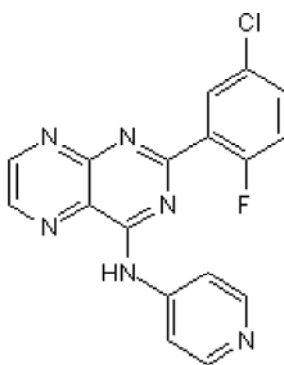
**Batch No.:** 5

CAS Number: 627536-09-8

IUPAC Name: 2-(5-Chloro-2-fluorophenyl)-4-[(4-pyridyl)amino]pteridine

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>17</sub>H<sub>10</sub>ClFN<sub>6</sub>·¼H<sub>2</sub>O  
**Batch Molecular Weight:** 357.25  
**Physical Appearance:** Light brown solid  
**Solubility:** DMSO to 20 mM with gentle warming  
**Storage:** Store at RT  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**TLC:** R<sub>f</sub> = 0.5 (Chloroform:Methanol [9:1])  
**HPLC:** Shows 99.9% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	57.15	2.96	23.52
Found	57.44	2.81	23.25

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

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**Description:**

Potent, orally active ATP-competitive transforming growth factor- $\beta$  receptor 1 (TGF- $\beta$ RI) inhibitor (IC<sub>50</sub> = 49 nM). Displays > 100-fold and > 17-fold selectivity over TGF- $\beta$ RII and other common kinases respectively. Exhibits anti-inflammatory and antitumor activity. Also promotes an antiglioma immune response. Ameliorates germinal matrix hemorrhage-induced neurological deficits in neonatal rats.

**Physical and Chemical Properties:**

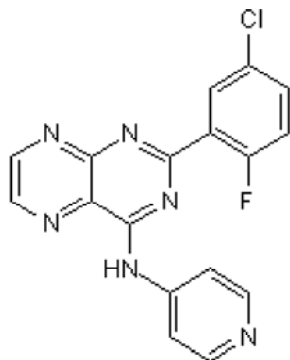
Batch Molecular Formula: C<sub>17</sub>H<sub>10</sub>ClFN<sub>6</sub>· $\frac{1}{4}$ H<sub>2</sub>O

Batch Molecular Weight: 357.25

Physical Appearance: Light brown solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**Storage:** Store at RT

**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:**

**Manaenko et al** (2014) Inhibition of transforming growth factor- $\beta$  attenuates brain injury and neurological deficits in a rat model of germinal matrix hemorrhage. *Stroke* **45** 828. PMID: 24425124.

**Kapoun et al** (2006) Transforming growth factor- $\beta$  receptor type I receptor (TGF $\beta$ RI) kinase activity but not p38 activation is required for TGF $\beta$ RI-induced myofibroblast differentiation and profibrotic gene expression. *Mol.Pharmacol.* **70** 518. PMID: 16707625.

**Leung et al** (2006) Effect of transforming growth factor- $\beta$  receptor I kinase inhibitor 2,4-disubstituted pteridine (SD-208) in chronic allergic airway inflammation and remodeling. *J.Pharmacol.Exp.Ther.* **319** 586. PMID: 16888081.

**Uhl et al** (2004) SD-208, a novel transforming growth factor  $\beta$  receptor I kinase inhibitor, inhibits growth and invasiveness and enhances immunogenicity of murine and human glioma cells in vitro and in vivo. *Cancer Res.* **64** 7954. PMID: 15520202.

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