

**Product Name:** Dasatinib

**Catalog No.:** 79

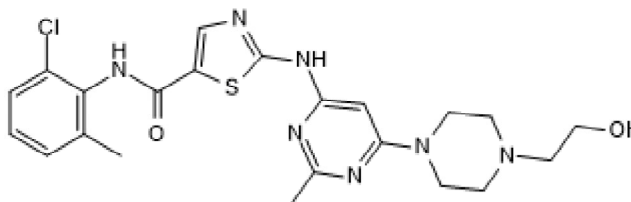
**Batch No.:** 4

CAS Number: 302962-49-8

IUPAC Name: -(2-Chloro-6-methylphenyl)-2- 6- 4-(2-hydroxyethyl)-1-piperazinyl -2-methyl-4-pyrimidinyl amino -5-thiazolecarboxamide

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>22</sub>H<sub>26</sub>ClN<sub>7</sub>O<sub>2</sub>S.  
**Batch Molecular Weight:** 488.01  
**Physical Appearance:** White solid  
**Solubility:** DMSO to 100 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 99.8% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	54.15	5.37	20.09
Found	53.83	5.03	19.51

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

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**Description:**

Dasatinib is a highly potent pan-Src/Bcr-Abl inhibitor (IC<sub>50</sub> values are 16 and 30 pM, respectively). Inhibits Bcr-Abl, Src, Lck, Fyn, c-kit and others with IC<sub>50</sub> values in the subnanomolar range. Inhibits proliferation of tumor cells in vitro and exhibits anticancer activity in vivo in a mouse chronic myelogenous leukemia (CML) xenograft model. Inhibits replication of SARS-CoV and MERS-CoV in vitro (EC<sub>50</sub> values are 2.1 and 5.5 nM, respectively). Dasatinib also enhances CD3-targeted lentiviral vector-mediated gene transfer by 3 to 10-fold. Targets and eliminates senescent cells. Orally bioavailable.

**Physical and Chemical Properties:**

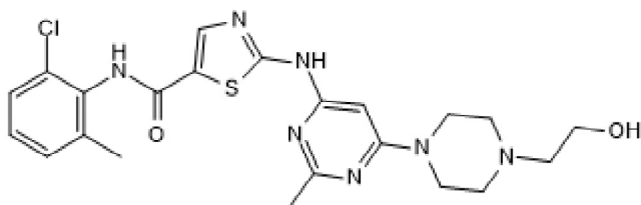
Batch Molecular Formula: C<sub>22</sub>H<sub>26</sub>ClN<sub>7</sub>O<sub>2</sub>S

Batch Molecular Weight: 488.01

Physical Appearance: White solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**References:**

**Braun et al** (2022) Dasatinib is a potent enhancer for CAR T cell generation by CD3-targeted lentiviral vectors. *Mol. Ther. Methods Clin. Dev.* **28** 90. PMID: 36620073.

**Dyall et al** (2014) Repurposing of clinically developed drugs for treatment of Middle East Respiratory Syndrome coronavirus infection. *Antimicrob. Agents Chemother.* **58** 4885. PMID: 24841273.

**Das et al** (2006) 2-aminothiazole as a novel kinase inhibitor template. Structure-activity relationship studies toward the discovery of N-(2-chloro-6-methylphenyl)-2-[6-(4-(2-hydroxyethyl)-1-piperazinyl)-4-pyrimidinyl]amino-1,3-thiazole-5-carboxamide. *J. Med. Chem.* **49** 6819. PMID: 17154512.

**Storage:** Store at -20°C

**Solubility & Usage Info:**

DMSO to 100 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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