Print Date: Sep 30th 2021

Certificate of Analysis

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Product Name: **Dasatinib** **Catalog No.: 6793** **Batch No.: 3**

CAS Number: 302962-49-8

IUPAC Name: *N*-(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: $C_{22}H_{26}ClN_7O_2S$.

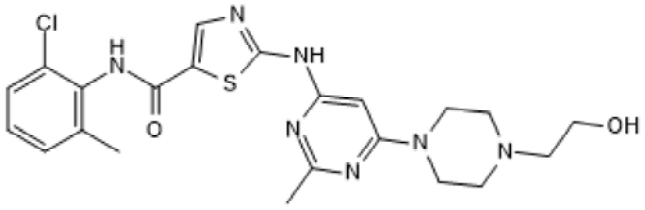
Batch Molecular Weight: 488.01

Physical Appearance: White solid

Solubility: DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.7% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	54.15	5.37	20.09
Found	53.81	5.47	19.98

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Product Information

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Description:

Dasatinib is a highly potent pan-Src/Bcr-Abl inhibitor (K_i values are 16 and 30 pM, respectively. Inhibits Bcr-Abl, Src, Lck, Fyn, c-kit and Yes with IC_{50} values in the subnanomolar range. Inhibits proliferation of tumor cells in vitro and exhibits anticancer acivity in vivo in a mouse chronic myelogenous leukemia (CML) xenograft model. Inhibits replication of SARS-CoV and MERS-CoV in vitro (EC_{50} values are 2.1and 5.5 µM, respectively).

Physical and Chemical Properties:

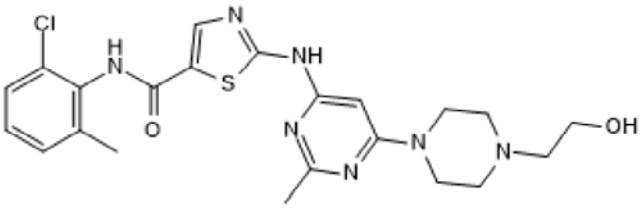
Batch Molecular Formula: $C_{22}H_{26}ClN_7O_2S$.

Batch Molecular Weight: 488.01

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



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. 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:

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)]-2-methyl-4-pyrimidinyl]amino)]-1,3-thiazole-5-carboxamide J.Med.Chem. ***49*** 6819. PMID: 17154512.

Lombardo *et al* (2004) Discovery of *N*-(2-chloro-6-methyl- phenyl)-2-(6-(4-(2-hydroxyethyl)- piperazin-1-yl)-2-methylpyrimidin-4-ylamino)thiazole-5-carboxamide (BMS-354825), a dual Src/Abl kinase inhibitor with potent antitumor activity in preclinical assays. J.Med.Chem. ***47*** 6658. PMID: 15615512.

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