

Certificate of Analysis

Product Name: SNS 314 mesylate

Catalog No.: 4584

Batch No.: 1

CAS Number: 1146618-41-8

IUPAC Name: *N*-(3-Chlorophenyl)-*N*-[5-[2-(thieno[3,2-*d*]pyrimidin-4-ylamino)ethyl]-2-thiazolyl]urea methanesulfonate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₈H₁₅ClN₆OS₂.CH₃SO₃H.2¼H₂O

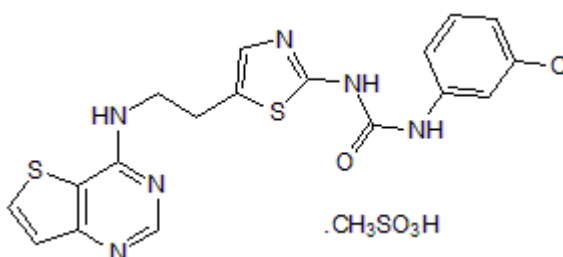
Batch Molecular Weight: 567.57

Physical Appearance: Off-white solid

Solubility: DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.47 (Dichloromethane:Methanol [9:1])

HPLC: Shows 99.1% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	40.21	4.17	14.81
Found	40.06	4.05	14.63

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

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Description:

Potent, ATP-competitive Aurora kinase inhibitor (IC₅₀ values are 3, 9 and 31 nM for Aurora C, A and B, respectively). Exhibits both in vitro and in vivo activity against human cancer cell lines and tumor xenograft models. Displays additive antiproliferative effects in combination with chemotherapeutics such as carboplatin (Cat. No. 2626), gemcitabine (Cat. No. 3259) and 5-fluorouracil (Cat. No. 3257).

Physical and Chemical Properties:

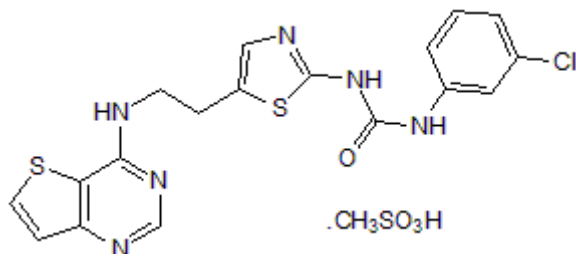
Batch Molecular Formula: C₁₈H₁₅ClN₆OS₂.CH₃SO₃H.2¼H₂O

Batch Molecular Weight: 567.57

Physical Appearance: Off-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:

Oslob *et al* (2008) Discovery of a potent and selective Aurora kinase inhibitor. *Bioorg.Med.Chem.Lett.* **18** 4880. PMID: 18678489.

VanderPorten *et al* (2009) The Aurora kinase inhibitor SNS-314 shows broad therapeutic potential with chemotherapeutics and synergy with microtubule-targeted agents in a colon carcinoma model. *Mol.Cancer Ther.* **8** 930. PMID: 19372566.

Arbitrario *et al* (2010) SNS-314, a pan-Aurora kinase inhibitor, shows potent and anti-tumor activity and dosing flexibility in vivo. *Cancer Chemother. Pharmacol.* **65** 707. PMID: 19649632.

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