

Product Name: NSC 109555 ditosylate

Catalog No.: 3034

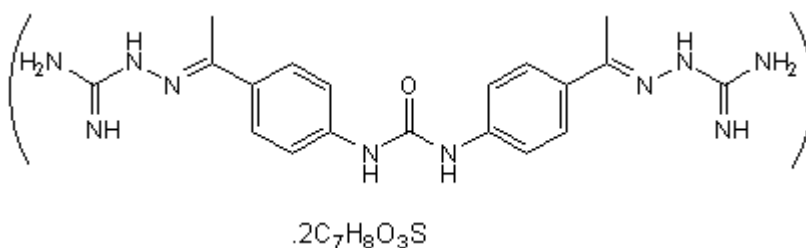
Batch No.: 1

CAS Number: 66748-43-4

IUPAC Name: 4,4'-diacetyldiphenylurea bis(guanylhyazone) ditosylate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{19}H_{24}N_{10}O \cdot 2C_7H_8O_3S \cdot 1\frac{1}{4}H_2O$
Batch Molecular Weight: 775.38
Physical Appearance: off-white solid
Solubility: DMSO to 10 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: $R_f = 0.4$ (Methanol:Ammonia soln. [9:1])
HPLC: Shows >98.4% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	51.12	5.52	18.06
Found	50.89	5.33	18.41

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

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Description:

Selective, reversible, ATP-competitive Chk2 inhibitor ($IC_{50} = 0.2 \mu M$) that displays no effect on a range of other kinases including Chk1 ($IC_{50} > 10 \mu M$). Inhibits histone H1 phosphorylation ($IC_{50} = 0.24 \mu M$) and attenuates mitochondrial ATP synthesis. Exhibits antiproliferative activity in a number of leukemias in vivo.

Physical and Chemical Properties:

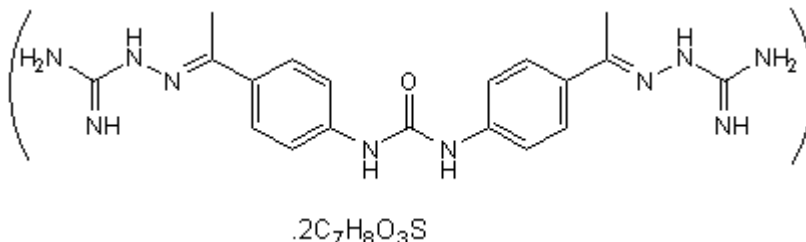
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Batch Molecular Weight: 775.38

Physical Appearance: off-white solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at $-20^\circ C$

Solubility & Usage Info:

DMSO to 10 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 $45-60^\circ C$ 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 $-20^\circ C$ or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Byczkowski et al (1981) Actions of bis(guanylhyazones) on isolated rat liver mitochondria. *Biochem.Pharmacol.* **30** 2851. PMID: 6895596.

Byczkowski et al (1982) Potentiation of the antimitochondrial and antiproliferative effects of bis(guanylhyazones) by phenethylbiguanide. *Cancer Res.* **42** 3592. PMID: 6896674.

Jobson et al (2007) Identification of a bis-guanylhyazone [4,4'-diacetyldiphenylurea-bis(guanylhyazone); NSC 109555] as a novel chemotype for inhibition of Chk2 kinase. *Mol.Pharmacol.* **72** 876. PMID: 17616632.

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