Certificate of Analysis

Product Name: **Hesperadin hydrochloride** **Catalog No.: 3988** **Batch No.: 1**

IUPAC Name: *N*-[2,3-Dihydro-2-oxo-3-[(3*Z*)-phenyl[[4-(1-piperidinylmethyl)phenyl]amino]methylene]-1*H*-indol-5-yl] -ethanesulfonamide hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{29}H_{32}N_4O_3S.HCl.1¼H_2O$

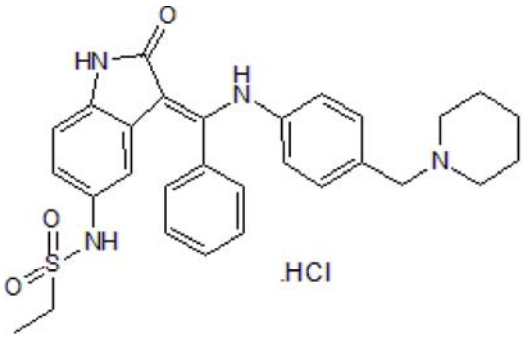
Batch Molecular Weight: 575.64

Physical Appearance: Beige solid

Solubility: DMSO to 100 mM
ethanol to 50 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.6 (Chloroform:Methanol [9:1])

HPLC: Shows 99.2% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	60.51	6.22	9.73
Found	60.45	6.32	9.45

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Description:

ATP-competitive inhibitor of Aurora B kinase (IC_{50} = 250 nM). Prevents chromosome alignment and segregation; also induces polyploidy and prevents histone H3-Ser10 phosphorylation. Overrides the spindle assembly checkpoint and induces mitotic exit in monastrol- and taxol-treated HeLa cells. Inhibits replication of influenza A and B viral strains (IC_{50} values range from 0.22 µM to 1.8 µM, dependant on strain), by inhibiting viral RNA transcription and translation

Physical and Chemical Properties:

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Minimum Purity: ≥99%

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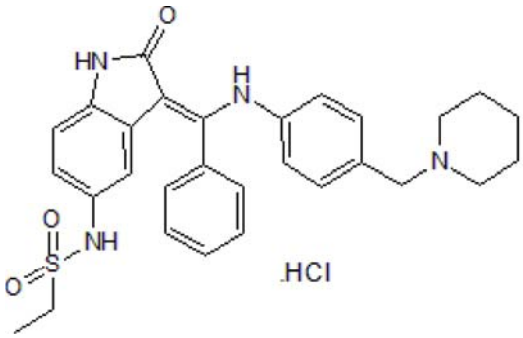

Storage: Desiccate at RT

Solubility & Usage Info:

DMSO to 100 mM
ethanol to 50 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:

Hu *et al* (2017) Chemical genomics approach leads to the identification of hesperadin, an aurora B kinase inhibitor, as a broad-spectrum influenza antiviral. Int.J.Mol.Sci. ***18*** 1929. PMID: 28885544.

Jetton *et al* (2009) The cell cycle as a therapeutic target against *Trypanosoma brucei*: Hesperadin inhibits Aurora kinase-1 and blocks mitotic progression in bloodstream forms. Mol.Microbiol. ***72*** 442. PMID: 19320832.

Sessa *et al* (2005) Mechanism of Aurora B activation by INCENP and inhibition by Hesperadin. Mol.Cell. ***18*** 379. PMID: 15866179.