Print Date: Apr 26th 2018

Certificate of Analysis

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Product Name: **NSC 663284** **Catalog No.: 1867** **Batch No.: 1**

CAS Number: 383907-43-5

IUPAC Name: 6-Chloro-7-[[2-(4-morpholinyl)ethyl]amino]-5,8-quinolinedione

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{15}H_{16}ClN_3O_3$

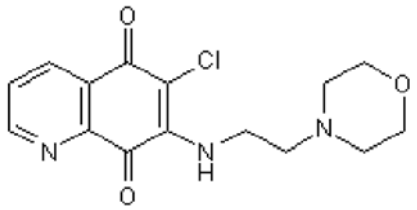
Batch Molecular Weight: 321.76

Physical Appearance: Red solid

Solubility: DMSO to 50 mM
ethanol to 50 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.5 (Dichloromethane:Methanol [9:2])

HPLC: Shows 99.9% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	55.99	5.01	13.05
Found	55.94	5.09	12.92

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Description:

Potent, selective inhibitor of Cdc25 dual specificity phosphatases (K_i values are 29, 95 and 89 nM for human Cdc25A, Cdc25B_2 and Cdc25C respectively); > 20- and > 450-fold selective over VHR and PTP1B phosphatases respectively. Arrests cells at both G_1 and G_2/M phase and blocks cdk2 and cdk1 activation. Blocks proliferation of a range of human tumor cell lines (IC_{50} = 0.2 - 35 µM).

Physical and Chemical Properties:

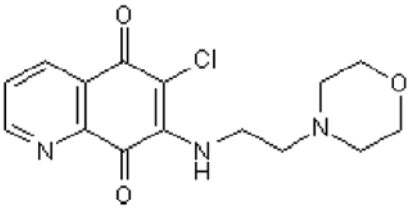
Batch Molecular Formula: $C_{15}H_{16}ClN_3O_3$

Batch Molecular Weight: 321.76

Physical Appearance: Red solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 50 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:

Brisson *et al* (2005) Redox regulation of cdc25B by cell-active Quinolinediones. Mol.Pharmacol. ***68*** 1810. PMID: 16155209.

Pu *et al* (2002) Dual G_1 and G_2 phase inhibition by a novel, selective Cdc25 inhibitor 7-chloro-6-(2-morpholin-4-ylethylamino) -quinoline-5,8-dione. J.Biol.Chem. ***277*** 46877. PMID: 12356752.

Lazo *et al* (2001) Discovery and biological evaluation of a new family of potent inhibitors of the dual specificity protein phosphatase Cdc25. J.Med.Chem. ***44*** 4042. PMID: 11708908.