Print Date: Jan 15th 2016

Certificate of Analysis

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Product Name: **L-779,450** **Catalog No.: 3185** **Batch No.: 1**

CAS Number: 303727-31-3

IUPAC Name: 2-Chloro-5-[2-Phenyl-5-(4-pyridinyl)-1*H*-imidazol-4-yl]phenol

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{20}H_{14}ClN_3O.½H_2O$

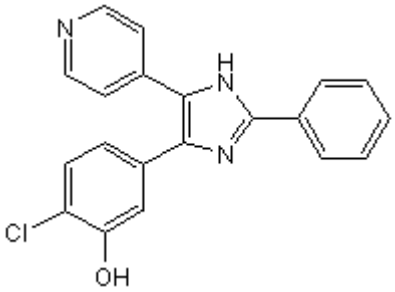
Batch Molecular Weight: 356.81

Physical Appearance: Beige solid

Solubility: DMSO to 100 mM
ethanol to 100 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.36 (Dichloromethane:Methanol [9:1])

HPLC: Shows 99.7% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	67.32	4.24	11.78
Found	67.56	4.43	11.77

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Description:

Potent, ATP-competitive Raf kinase inhibitor (IC_{50} = 10 nM) that displays > 7, > 30 and > 70-fold selectivity over p38α, GSK3β and Lck respectively. Suppresses DNA synthesis and induces apoptosis in cells that proliferate in response to Raf-1 and A-Raf but not B-Raf.

Physical and Chemical Properties:

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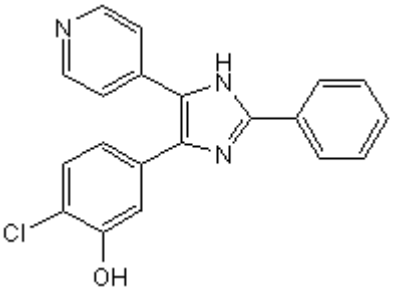
Physical Appearance: Beige solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 100 mM
ethanol 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:

White (2003) Small-molecule inhibitors of signal transduction pathways in leukemia therapeutics: how to assess selectivity for malignant signals. Leukemia ***17*** 1759. PMID: 12970775.

Shelton *et al* (2003) Differential effects of kinase cascade inhibitors on neoplastic and cytokine-mediated cell proliferation. Leukemia ***17*** 1765. PMID: 12970777.

Takle *et al* (2006) Identification of potent and selective imidazole-based inhibitors of B-Raf kinase. Bioorg.Med.Chem.Letts. ***16*** 378.

Röring *et al* (2012) Distinct requirement for an intact dimer interface in wild-type, V600E and kinase-dead B-Raf signalling. EMBO J. ***31*** 2629. PMID: 22510884.