

**Product Name:** PI 103 hydrochloride

**Catalog No.:** 2930

**Batch No.:** 3

**CAS Number:** 371935-79-4

**IUPAC Name:** 3-[4-(4-Morpholinyl)pyrido[3',2':4,5]furo[3,2-d]pyrimidin-2-yl]phenol hydrochloride

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>19</sub>H<sub>16</sub>N<sub>4</sub>O<sub>3</sub>·HCl·1¼H<sub>2</sub>O

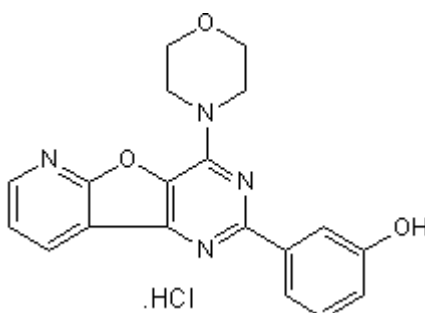
**Batch Molecular Weight:** 407.34

**Physical Appearance:** Off-white solid

**Solubility:** DMSO to 100 mM

**Storage:** Desiccate at +4°C

**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.4 (Dichloromethane:Methanol:Acetic acid [95/5/0.5])

**HPLC:** Shows 98.5% purity

**<sup>1</sup>H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	56.02	4.82	13.75
Found	56.06	4.57	14.06

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**Description:**

Inhibitor of DNA-PK, PI 3-kinase (p110 $\alpha$ ) and mTOR (IC<sub>50</sub> values are 2, 8, 20, 26, 48, 83, 88, 150, 850, 920, ~ 1000 and 2300 nM for DNA-PK, p110 $\alpha$ , mTORC1, PI 3-KC2 $\beta$ , p110 $\delta$ , mTORC2, p110 $\beta$ , p110 $\gamma$ , ATR, ATM, PI 3-KC2 $\alpha$  and hsVPS34 respectively). Inhibits growth of human tumor xenografts in mice in vivo. Induces autophagosome formation in glioma cells.

**Physical and Chemical Properties:**

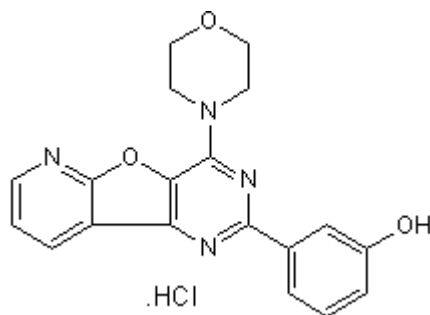
Batch Molecular Formula: C<sub>19</sub>H<sub>16</sub>N<sub>4</sub>O<sub>3</sub>.HCl.1 ¼H<sub>2</sub>O

Batch Molecular Weight: 407.34

Physical Appearance: Off-white solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**Storage:** Desiccate at +4°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:**

**Fan et al (2006)** A dual PI3 kinase/mTOR inhibitor reveals emergent efficacy in glioma. *Cancer cell* **9** 341. PMID: 16697955.

**Knight et al (2006)** A pharmacological map of the PI3-K family defines a role for p110 $\alpha$  in insulin signaling. *Cell* **125** 733. PMID: 16647110.

**Raynaud et al (2007)** Pharmacologic characterization of a potent inhibitor of class I phosphatidylinositol 3-kinase. *Cancer Res.* **67** 5840. PMID: 17575152.

**Fan et al (2010)** Akt and autophagy cooperate to promote survival of drug-resistant glioma. *Sci.Signal.* **3** ra81. PMID: 21062993.

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