bio-techne
TOCRIS

Print Date: Feb 26th 2024

Certificate of Analysis

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Product Name: **PI 103 hydrochloride** **Catalog No.: 2930** **Batch No.: 3**

CAS Number: 371935-79-4

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

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{19}H_{16}N_4O_3.HCl.1¼H_2O$

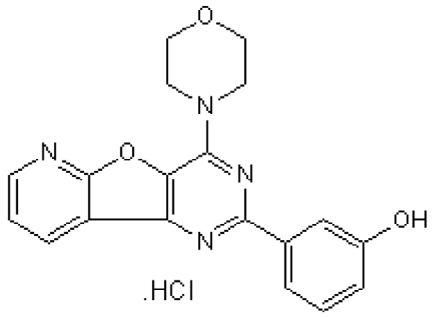
Batch Molecular Weight: 407.34

Physical Appearance: Off-white solid

Solubility: DMSO to 20 mM

Storage: Desiccate at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.4 (Dichloromethane:Methanol:Acetic acid [95/5/0.5])

HPLC: Shows 97.6% purity

^{1}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:

PI 103 hydrochloride is an inhibitor of DNA-PK, PI 3-kinase (p110α) and mTOR (IC_{50} values are 2, 8, 20, 26, 48, 83, 88, 150, 850, 920, ~ 1000 and 2300 nM for DNA-PK, p110α, mTORC1, PI 3-KC2β, p110δ, mTORC2, p110β, p110γ, ATR, ATM, PI 3-KC2α and hsVPS34 respectively). Inhibits growth of human tumor xenografts in mice in vivo. Induces autophagosome formation in glioma cells.

Physical and Chemical Properties:

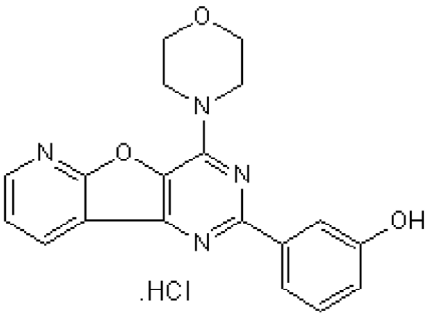
Batch Molecular Formula: $C_{19}H_{16}N_4O_3.HCl.1¼H_2O$

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 20 mM

When purchased as a 1mg unit, this product is supplied in lyophilized form. It may appear as a solid, gel or film and be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

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. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

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

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