



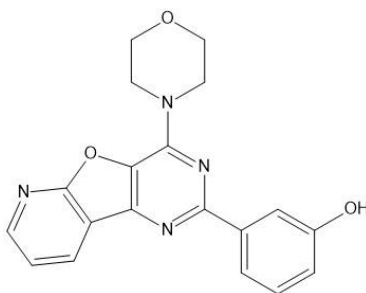
Catalog # 10-5406

PI-103

CAS# 371935-74-9

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

Lot # X109496



A potent inhibitor of PI-3 kinase, mTOR and DNA-PK, IC_{50} = 8, 88, 150, 48, 20, 83 and 2 nM for p110 α , p110 β , p110 γ , p110 δ , mTORC1, mTORC2 and DNA-PK respectively.^{1,2} Synergizes with arsenic disulfide to eradicate AML stem cells by induction of differentiation.³ Inhibits the growth of gefitinib-resistant non-small cell lung cancer cell lines.⁴ Induces autophagy in drug-resistant glioma.⁵ Protects against α -synuclein-induced toxicity in human neurons by induction of macroautophagy.⁶

- 1) Knight et al. (2006), A Pharmacological map of the PI3-K family defines a role for p110 α in insulin signaling; Cell, **125** 733
- 2) Raynaud et al. (2007), Pharmacologic characterization of a potent inhibitor of a class I phosphatidylinositide 3-kinases; Cancer Res., **67** 5840
- 3) Hong et al. (2011), Arsenic disulfide synergizes with the phosphoinositide 3-kinase inhibitor PI-103 to eradicate acute myeloid leukemia stem cells by inducing differentiation; Carcinogenesis, **32** 1550
- 4) Zou et al. (2009), A novel dual PI3K α /mTOR inhibitor PI-103 with high antitumor activity in non-small cell lung cancer cells; Int. J. Mol. Med. **24** 97
- 5) Fan et al. (2010), Akt and autophagy cooperate to promote survival of drug-resistant glioma; Sci. Signal., **3** ra81
- 6) Hollerhage et al. (2019), Multiple molecular pathways stimulating macroautophagy protect from α -synuclein-induced toxicity in human neurons; Neuropharmacology, **149** 13

PHYSICAL DATA

Molecular Weight: 348.36
Molecular Formula: C₁₉H₁₆N₄O₃
Purity: 98% by TLC
NMR: (Conforms)
Solubility: DMSO (up to 40 mg/ml)
Physical Description: White solid
Storage and Stability: Store as supplied desiccated at -20°C for up to 2 years from the date of purchase.
Solutions in DMSO may be stored at -20°C for up to 2 months.

Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.

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