

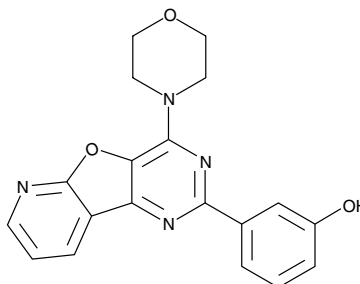
# Product Information



## PI-103

Item No. 10009209

**Cas Registry No.:** 371935-74-9  
**Formal Name:** 3-[4-(4-morpholinyl)pyrido[3',2':4,5]furo[3,2-d]pyrimidin-2-yl]-phenol  
**MF:** C<sub>19</sub>H<sub>16</sub>N<sub>4</sub>O<sub>3</sub>  
**FW:** 348.4  
**Purity:** ≥98%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid  
**UV/Vis.:** λ<sub>max</sub>: 221, 258, 285, 292 nm



### Laboratory Procedures

For long term storage, we suggest that PI-103 be stored as supplied at -20°C. It should be stable for at least two years.

PI-103 is supplied as a crystalline solid. A stock solution may be made by dissolving the PI-103 in an organic solvent purged with an inert gas. PI-103 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of PI-103 in these solvents is approximately 10 mg/ml.

PI-103 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PI-103 should first be dissolved in DMSO or DMF and then diluted with the aqueous buffer of choice. PI-103 has a solubility of approximately 0.25 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

The phosphatidylinositol 3-kinase (PI3K) family of enzymes is comprised of 15 members that are divided into three classes according to their structure, substrate specificity, and mode of regulation.<sup>1,2</sup> PI-103 is a potent, cell-permeable, ATP-competitive inhibitor of PI3K family members with selectivity toward DNA-PK, PI3K (p110α), and mTOR. The IC<sub>50</sub> values are 2, 8, 20, 26, 48, 83, 88, and 150 nM for DNA-PK, p110α, mTORC1, PI3-KC2β, p110δ, mTORC2, p110β, and p110γ, respectively.<sup>1</sup> PI-103 exhibits antiproliferative activity against a panel of glioma cell lines *in vitro* at a concentration of 0.5 μM. It also inhibits growth of established human glioma tumor xenografts *in vivo* with no observable toxicity.<sup>3</sup>

### References

1. Knight, Z.A., Gonzalez, B., Feldman, M.E., *et al.* A pharmacological map of the PI3-K family defines a role for p110α in insulin signaling. *Cell* **125**, 733-747 (2006).
2. Rückle, T., Schwarz, M.K., and Rommel, C. PI3Ky inhibition: Towards an 'aspirin of the 21st century'? *Nature Reviews Drug Discovery* **5**, 903-918 (2006).
3. Fan, Q.-W., Knight, Z.A., Goldenberg, D.D., *et al.* A dual PI3 kinase/mTOR inhibitor reveals emergent efficacy in glioma. *Cancer Cell* **9**, 341-349 (2006).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/10009209](http://www.caymanchem.com/catalog/10009209)

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**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

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