

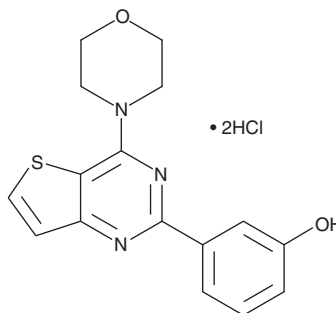
# PRODUCT INFORMATION



## PI3-Kinase $\alpha$ Inhibitor 2 (hydrochloride)

Item No. 21197

**CAS Registry No.:** 1188890-32-5  
**Formal Name:** 3-[4-(4-morpholinyl)thieno[3,2-d]pyrimidin-2-yl]-phenol, dihydrochloride  
**Synonyms:** Phosphatidylinositol 3-Kinase  $\alpha$  Inhibitor 2, PI3K $\alpha$  Inhibitor 2  
**MF:** C<sub>16</sub>H<sub>15</sub>N<sub>3</sub>O<sub>2</sub>S • 2HCl  
**FW:** 386.3  
**Purity:**  $\geq$ 98%  
**UV/Vis.:**  $\lambda_{\text{max}}$ : 211, 263, 311 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

PI3-Kinase  $\alpha$  (PI3K $\alpha$ ) inhibitor 2 (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the PI3K $\alpha$  inhibitor 2 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. PI3K $\alpha$  inhibitor 2 (hydrochloride) is soluble in the organic solvent DMSO.

### Description

PI3K $\alpha$  inhibitor 2 is an inhibitor of PI3K p110 $\alpha$  ( $IC_{50}$  = 2 nM in an enzyme assay).<sup>1</sup> It is selective for p110 $\alpha$  over p110 $\beta$ , p110 $\gamma$ , and PI3K C2 $\beta$  ( $IC_{50}$ s = 16, 660, and 220 nM, respectively). It also inhibits mammalian target of rapamycin (mTOR;  $IC_{50}$  = 49 nM).<sup>2</sup> PI3K $\alpha$  inhibitor 2 inhibits proliferation in A375 melanoma cells with an  $IC_{50}$  value of 0.58  $\mu$ M.<sup>1</sup>

### References

- Hayakawa, M., Kaizawa, H., Moritomo, H., *et al.* Synthesis and biological evaluation of 4-morpholino-2-phenylquinazolines and related derivatives as novel PI3 kinase p110 $\alpha$  inhibitors. *Bioorg. Med. Chem.* **14**(20), 6847-6858 (2006).
- Verheijen, J.C., Yu, K., Toral-Barza, L., *et al.* Discovery of 2-arylthieno[3,2-d]pyrimidines containing 8-oxa-3-azabi-cyclo[3.2.1]octane in the 4-position as potent inhibitors of mTOR with selectivity over PI3K. *Bioorg. Med. Chem. Lett.* **20**(1), 375-379 (2010).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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