

PRODUCT INFORMATION



PIK-III

Item No. 17002

CAS Registry No.: 1383716-40-2

Formal Name: 4'-(cyclopropylmethyl)-N²-4-pyridinyl-[4,5'-bipyrimidine]-2,2'-diamine

Synonyms: Vacuolar Protein Sorting 34 Inhibitor 2, Vps34-IN2, Vps34 Inhibitor 2

MF: C₁₇H₁₇N₇

FW: 319.4

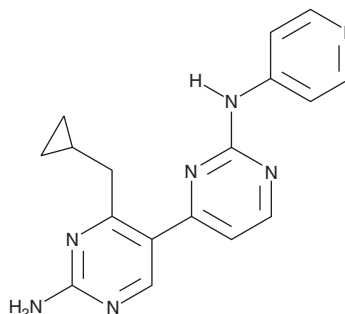
Purity: ≥98%

UV/Vis.: λ_{max}: 284 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

PIK-III is supplied as a crystalline solid. A stock solution may be made by dissolving the PIK-III in the solvent of choice. PIK-III is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of PIK-III in these solvents is approximately 0.14, 15, and 10 mg/ml, respectively. PIK-III is slightly soluble in PBS (pH 7.2).

PIK-III is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PIK-III should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. PIK-III has a solubility of approximately 0.33 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.

Description

PIK-III is an inhibitor of the type 3 phosphatidylinositol 3-kinase (PI3K) vacuolar protein sorting 34 (Vps34) that binds a unique hydrophobic pocket (IC₅₀ = 18 nM).¹ It is selective for Vps34 over related PI3K isoforms, PI4Kβ, and mTOR. PIK-III acutely inhibits autophagy and *de novo* lipidation of LC3, leading to stabilization of autophagy substrates.¹

Reference

1. Dowdle, W.E., Nyfeler, B., Nagel, J., *et al.* Selective VPS34 inhibitor blocks autophagy and uncovers a role for NCOA4 in ferritin degradation and iron homeostasis *in vivo*. *Nat. Cell. Biol.* **16**(11), 1069-1079 (2014).

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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM