

Produktinformation



Forschungsprodukte & Biochemikalien
Zellkultur & Verbrauchsmaterial
Diagnostik & molekulare Diagnostik
Laborgeräte & Service

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Product Information



PIK-90

Item No. 10010749

CAS Registry No.: Formal Name:	677338-12-4 N-(2,3-dihydro-7,8- dimethoxyimidazo[1,2-c]quinazolin-5- yl)-3-pyridinecarboxamide	
Synonym:	PIK-85	
MF:	$C_{18}H_{17}N_5O_3$	
FW:	351.4	
Purity:	≥98%	0 0
Stability:	≥2 years at -20°C	
Supplied as:	A crystalline solid	
UV/Vis.:	λ_{max} : 229, 276 nm	

Laboratory Procedures

For long term storage, we suggest that PIK-90 be stored as supplied at -20°C. It should be stable for at least two years. PIK-90 is supplied as a crystalline solid. A stock solution may be made by dissolving the PIK-90 in the solvent of choice. PIK-90 is soluble in DMSO, which should be purged with an inert gas. The solubility of PIK-90 in DMSO is approximately 0.5 mg/ml.

PIK-90 is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

PIK-90 is a potent and cell permeable phosphoinositide 3-kinase (PI3K) inhibitor (IC₅₀ = 11, 350, 18, and 58 nM for p110 subunit isoforms α , β , γ , and δ , respectively).¹ Through this action, PIK-90 reduces chemotaxis and induces apoptosis in chronic lymphocytic leukemia B cells.¹ It also blocks proliferation of glioma cells in vitro.² By inhibiting P110α, PIK-90 blocks insulin-stimulated phosphorylation of Akt in L1 adipocytes and L6 myotubes, preventing activation of the mTORC1 pathway.³

References

- 1. Niedermeier, M., Hennessy, B.T., Knight, Z.A., et al. Isoform-selective phosphoinositide 3'-kinase inhibitors inhibit CXCR4 signaling and overcome stromal cell-mediated drug resistance in chronic lymphocytic leukemia: A novel therapeutic approach. Blood 113(22), 5549-5557 (2009).
- 2. 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).
- Knight, Z.A., Gonzalez, B., Feldman, M.E., et al. A pharmacological map of the PI3-K family defines a role for p110α 3. in insulin signaling. Cell 125, 733-747 (2006).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10010749

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

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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