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Produktinformation

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

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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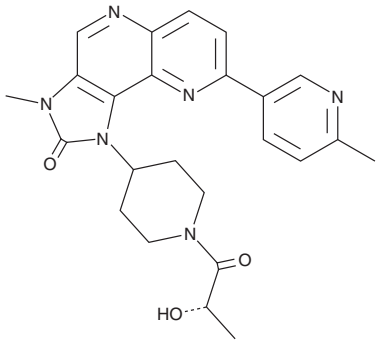
PRODUCT INFORMATION

PF-04979064

Item No. 39527

CAS Registry No.:	1220699-06-8
Formal Name:	1,3-dihydro-1-[1-[(2S)-2-hydroxy-1-oxopropyl]-4-piperidinyl]-3-methyl-8-(6-methyl-3-pyridinyl)-2H-imidazo[4,5-c][1,5]naphthyridin-2-one
MF:	$C_{24}H_{26}N_6O_3$
FW:	446.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 272, 325 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

PF-04979064 is supplied as a solid. A stock solution may be made by dissolving the PF-04979064 in the solvent of choice, which should be purged with an inert gas. PF-04979064 is soluble in methanol.

Description

PF-04979064 is a dual inhibitor of PI3K and mTOR (K_is = 0.13, 0.111, 0.122, and 1.42 nM for PI3Kα, PI3Kγ, PI3Kδ, and mTOR, respectively).[1] It is selective for PI3K and mTOR over a panel of 36 other kinases at 1 µM. PF-04979064 inhibits phosphorylation of Akt in BT-20 breast cancer cells (IC_{50} = 9.1 nM). It reduces tumor volume by 88% in a U87MG glioblastoma mouse xenograft model when administered at a dose of 40 mg/kg. PF-04979064 also increases alveolar epithelial cell apoptosis in a mouse model of chronic obstructive pulmonary disease (COPD) induced by fine particulate matter less than 2.5 µm ($PM_{2.5}$).[2]

References

1. Cheng, H., Li, C., Bailey, S., *et al*. Discovery of the highly potent PI3K/mTOR dual inhibitor PF-04979064 through structure-based drug design. *ACS Med. Chem. Lett*. **4(1)**, 91-97 (2012).
2. Zhang, F., Ma, H., Wang, Z.L., *et al*. The PI3K/AKT/mTOR pathway regulates autophagy to induce apoptosis of alveolar epithelial cells in chronic obstructive pulmonary disease caused by PM2.5 particulate matter. *J. Int. Med. Res*. **48(7)**, 300060520927919 (2020).

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