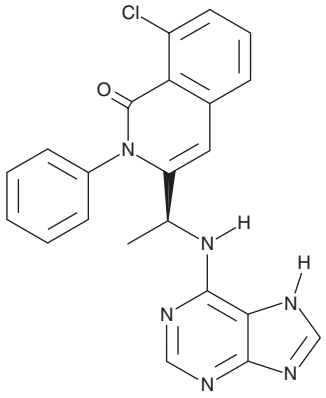
PRODUCT INFORMATION

IPI-145

Item No. 16800



CAS Registry No.:	1201438-56-3
Formal Name:	8-chloro-2-phenyl-3-[(1S)-1-(9H-purin-6-ylamino)ethyl]-1(2H)-isoquinolinone
Synonyms:	Duvelisib, INK1197
MF:	$C_{22}H_{17}ClN_6O$
FW:	416.9
Purity:	≥98%
UV/Vis.:	λ_{max}: 213, 239, 270, 344 nm
Supplied as:	A crystalline 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

IPI-145 is supplied as a A crystalline solid. A stock solution may be made by dissolving the IPI-145 in the solvent of choice, which should be purged with an inert gas. IPI-145 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of IPI-145 in these solvents is approximately 10 mg/ml.

IPI-145 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, IPI-145 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. IPI-145 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

IPI-145 is a potent inhibitor of the phosphoinositide 3-kinase (PI3K) isoforms PI3Kγ and PI3Kδ (IC_{50}s = 0.24 and 50 nM, respectively).[1] It is orally bioavailable and selective.[1] As PI3Kγ and PI3Kδ are preferentially expressed in immune cells, IPI-145 has profound effects in collagen-induced and adjuvant-induced arthritis, ovalbumin-induced asthma, and systemic lupus erythematosus animal models.[1,2] It also has potential applications in immunotherapy and in certain cancers.[3,4]

References

1. Winkler, D.G., Faia, K.L., DiNitto, J.P., *et al.* PI3K-δ and PI3K-γ inhibition by IPI-145 abrogates immune responses and suppresses activity in autoimmune and inflammatory disease models. *Chem. Biol.* **20(11)**, 1364-1374 (2013).
2. Boyle, D.L., Kim, H.R., Topolewski, K., *et al.* Novel phosphoinositide 3-kinase δ,γ inhibitor: Potent anti-inflammatory effects and joint protection in models of rheumatoid arthritis. *J. Pharmacol. Exp. Ther.* **348(2)**, 271-280 (2014).
3. Mockler, M.B., Conroy, M.J., and Lysaght, J. Targeting T cell immunometabolism for cancer immunotherapy; understanding the impact of the tumor microenvironment. *Front. Oncol.* **4(107)**, 1-11 (2014).
4. Falasca, M., and Maffucci, T. Targeting p100γ in gastrointestinal cancers: Attack on multiple fronts. *Front. Physiol.* **5(391)**, 1-10 (2014).

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