Print Date: Apr 2nd 2015

Certificate of Analysis

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Product Name: **GSK 2334470** **Catalog No.: 4143** **Batch No.: 1**

CAS Number: 1227911-45-6

IUPAC Name: (3*S*,6*R*)-1-[6-(3-Amino-1*H*-indazol-6-yl)-2-(methylamino)-4-pyrimidinyl]-*N*-cyclohexyl-6-methyl-3-piperidinecarboxamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{25}H_{34}N_8O.H_2O$

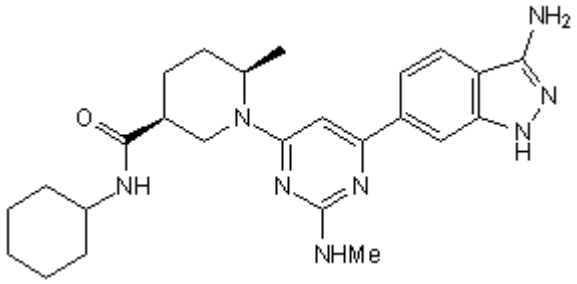
Batch Molecular Weight: 480.61

Physical Appearance: Light yellow solid

Solubility: DMSO to 100 mM
ethanol to 100 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.4 (Chloroform:Methanol [9:1])

HPLC: Shows 98.6% purity

Chiral HPLC: Shows 100% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: $[\alpha]_D$ = -27.6 (Concentration = 1.16, Solvent = Methanol)

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	62.48	7.55	23.31
Found	62.28	7.53	23.19

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Description:

Potent 3-phosphoinositide-dependent protein kinase (PDK1) inhibitor (IC_{50} ~ 10 nM). Exhibits no effect on other kinases including Aurora, ROCK, p38 MAPK and PI 3-K. Suppresses T-loop phosphorylation and subsequent activation of PDK1 substrates S6K1, SGK and RSK in vitro; exhibits limited inhibitory effect on Akt activation. Delays melanomagenesis and metastasis in $Braf^{V600E}$::$Pten^{(-/-)}$ mice.

Physical and Chemical Properties:

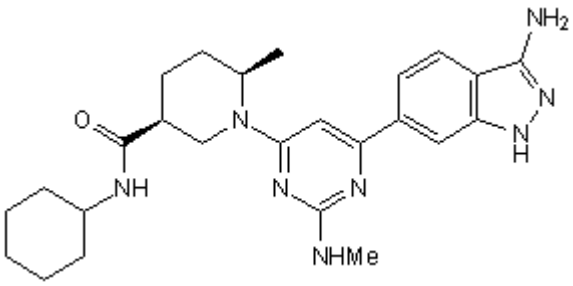
Batch Molecular Formula: $C_{25}H_{34}N_8O.H_2O$

Batch Molecular Weight: 480.61

Physical Appearance: Light yellow solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 100 mM
ethanol to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Najafov *et al* (2011) Characterization of GSK2334470, a novel and highly specific inhibitor of PDK1. Biochem.J. ***433*** 357. PMID: 21087210.

Scortegagna *et al* (2014) Genetic inactivation or pharmacological inhibition of Pdk1 delays development and inhibits metastasis of $Braf^{V600E}$::$Pten^{(-/-)}$ melanoma. Oncogene ***33*** 4330. PMID: 24037523.