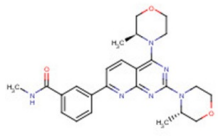
Data Sheet (Cat.No.T1961)

TargetMol
A DRUG SCREENING EXPERT

Vistusertib

Chemical Properties



CAS No.:	1009298-59-2
Formula:	C25H30N6O3
Molecular Weight:	462.54
Appearance:	Solid
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	AZD2014 is an orally bioavailable inhibitor of the mammalian target of rapamycin (mTOR) with potential antineoplastic activity.
Targets(IC_{50})	mTOR: 2.8nM P-Akt (S473): 80nM pS6 (S235/236): 200nM PI3Kα: 3.766μM
Kinase Assay	Recombinant truncated FLAG-tagged mTOR expressed in HEK 293 cells is used in biochemical assays, together with a biotinylated p70S6K peptide substrate. Streptavidin donor and protein A acceptor beads are used to assemble the capture complex for generation of the assay signal. The activity of the lipid kinases, PI3K alpha, beta, delta, and gamma are measured using recombinant proteins and the lipid PIP2 as substrate. Assays for ATM and DNA-PK activity are performed. The mTOR cellular activity is measured in MDAMB468 cells, using an Acumen laser scanning cytometer to analyze the levels of phosphorylation of S6 (Ser235/236) and AKT (Ser473) [1].
Cell Research	AZD2014 is prepared in DMSO (10 mM) and stored under nitrogen, and then diluted with appropriate media before use[1]. Cells are plated in 96-well plates for the indicated time. For CellTiterGlo assays: CellTiterGlo is mixed with the cells. Cells are normalized to day 0 control and net growth is determined using the following formula: ((x−y)/(z−y))=net growth, where x=reading of treated sample at end of study, y=average reading on day 0, and z=reading of DMSO-treated sample at end of study. The concentration of DMSO does not exceed 0.03% for any experiment. For MTS assays: adherent cell lines are grown in 96-well plates. MTS reagent is added on day 0 and on day 3 post-AZD2014 addition. Suspension lines are assayed using the Alamar Blue reagent, 72 hours after AZD2014 addition[1].
Animal Research	Animal Model: SCID mice

Solubility Information

Solubility	DMSO: 36 mg/mL (77.8 mM) Ethanol: <1 mg/mL Water: <1 mg/mL (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.162 mL	10.81 mL	21.62 mL
5 mM	0.432 mL	2.162 mL	4.324 mL
10 mM	0.216 mL	1.081 mL	2.162 mL
50 mM	0.043 mL	0.216 mL	0.432 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Sylvie M, et al, AACR Annual Meeting, 2012, Abst 917.
2. Guichard SM, et al. Mol Cancer Ther. 2015, 14(11):2508-18.

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