

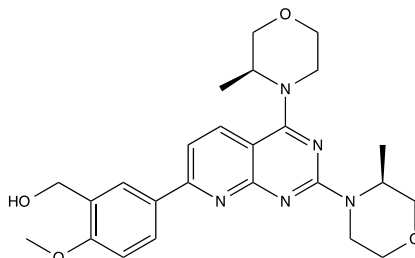
Catalog # 10-4816

AZD8055

CAS# 1009298-09-2

(5-(2,4-bis((3S)-3-methylmorpholin-4-yl)pyrido(2,3-d)pyrimidin-7-yl)-2-methoxyphenyl)methanol

Lot # FBS1016



AZD8055 is a potent and highly selective inhibitor of mammalian target of rapamycin kinase (mTOR) kinase ($IC_{50} = 0.8$ nM).^{1,2} mTOR acts as a nutrient/energy/redox sensor and a controller of protein synthesis – as such it is a very important target for cancer research. It has been investigated as a potential chemotherapeutic for various cancers.³⁻⁷

- 1) Chresta *et al.* (2010), *AZD8055 is a potent, selective, and orally bioavailable ATP-competitive mammalian target of rapamycin kinase inhibitor with in vitro and in vivo antitumor activity*; *Cancer Res.* **70** 288
- 2) Pike *et al.* (2013), *Optimization of potent and selective dual mTORC1 and mTORC2 inhibitors: the discovery of AZD8055 and AZD2014*; *Bioorg.Med.Chem.Lett.* **23** 1212
- 3) Holt *et al.* (2012), *Enhanced apoptosis and tumor growth suppression elicited by combination of MEK (selumetinib) and mTOR kinase inhibitors (AZD8055)*; *Cancer Res.* **72** 1804
- 4) Willems *et al.* (2012), *The dual mTORC1 and mTORC2 inhibitor AZD8055 has anti-tumor activity in acute myeloid leukemia*; *Leukemia* **26** 1195
- 5) Li *et al.* (2013), *The mTOR inhibitor AZD8055 inhibits proliferation and glycolysis in cervical cancer cells*; *Oncol.Lett.* **5** 717
- 6) Li *et al.* (2013), *The dual mTORC1 and mTORC2 inhibitor AZD8055 inhibits head and neck squamous cell carcinoma cell growth in vivo and in vitro*; *Biochem.Biophys.Res.Comm.* **440** 701
- 7) Hu *et al.* (2014), *AZD8055 induces cell death associated with autophagy and activation of AMPK in hepatocellular carcinoma*; *Oncol.Rep.* **31** 649

PHYSICAL DATA

Molecular Weight:	465.54
Molecular Formula:	C ₂₅ H ₃₁ N ₅ O ₄
Purity:	99% by HPLC
	NMR: Conforms
Solubility:	DMSO (>30 mg/mL)
Physical Description:	Yellow solid
Storage and Stability:	Store as supplied at -20°C for up to 1 year from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 2 months.

Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.