

## 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) methanological and the second sec



AZD8055 is a potent and highly selective inhibitor of mammalian target of rapamycin kinase (mTOR) kinase ( $IC_{50} = 0.8$  nM).<sup>1,2</sup> 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.<sup>3-7</sup>

- 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 an 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.Commun. **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 <sub>25</sub> H <sub>31</sub> N <sub>5</sub> O <sub>4</sub>	
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.	

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