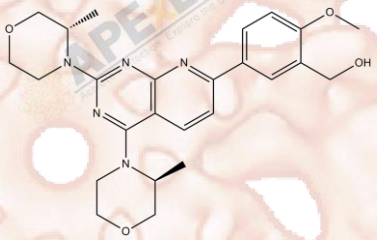
Product Data Sheet

AZD8055



Cat. No.:	A8214
CAS No.:	1009298-09-2
Formula:	C25H31N5O4
M.Wt:	465.54
Synonyms:	
Target:	PI3K/Akt/mTOR Signaling
Pathway:	mTOR
Storage:	Store at -20°C

Solvent & Solubility

In Vitro

≥23.3 mg/mL in DMSO; insoluble in H2O; insoluble in EtOH

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	2.1480 mL	10.7402 mL	21.4804 mL
5 mM	0.4296 mL	2.1480 mL	4.2961 mL
10 mM	0.2148 mL	1.0740 mL	2.1480 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	MTOR inhibitor
IC_{50} & Target	0.8 nM (mTOR (full length)), 0.13 nM (mTOR (truncated))

In Vitro

Cell Viability Assay

Cell Line:	TamR and MCF7-X cells
Preparation method：	The solubility of this compound in DMSO is >10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.
Reacting conditions:	100 nM, 3 days

	Applications:	The impact of AZD8055 on TamR and MCF-7-X cell proliferation was monitored using MIB1 Ki67 staining. Three days treatment with 50 nM AZD8055 reduced Ki67 staining in both TamR and MCF7-X cells and after treatment with 100 nM 40% to 50% of all cells were deemed negative for MIB1 indicating a significant exit from the cell cycle.
In Vivo	**Animal experiment**	
	Animal models:	Female C57BL/6 mice
	Dosage form:	Intraperitoneal injection, 10 mg/kg
	Applications:	Overnight fasted mice were intraperitoneal-injected with either vehicle or AZD8055. 3 h after AZD8055 injection additional blood was sampled for plasma insulin and fatty acids (FA) determinations. Glucose levels in AZD8055 injected mice were elevated 3 and 6 h after drug injection but were similar to control mice at 24 h after drug injection. Along with elevated glucose levels at 3 h, AZD8055 treated mice had 3-fold higher plasma insulin levels and lower plasma FAs.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Wang Q, Zhou Y, et al. "Deptor is a novel target of Wnt/β-catenin/c-Myc and contributes to colorectal cancer cell growth." Cancer Res. 2018 Apr 17. pii:canres.3107.2017.PMID:29666061

2. Dite TA, Ling NXY, et al. "The autophagy initiator ULK1 sensitizes AMPK to allosteric drugs." NatCommun. 2017 Sep 18;8(1):571.PMID:28924239

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References

[1] Jordan NJ, Dutkowski CM, Barrow D, Mottram HJ, Hutcheson IR, Nicholson RI, Guichard SM, Gee JM. Impact of dual mTORC1/2 mTOR kinase inhibitor AZD8055 on acquired endocrine resistance in breast cancer in vitro. Breast Cancer Res. 2014 Jan 23;16(1):R12.

[2] Kleinert M, Sylow L, Fazakerley DJ, Krycer JR, Thomas KC, Oxbøll AJ, Jordy AB, Jensen TE, Yang G, Schjerling P, Kiens B, James DE, Ruegg MA, Richter EA. Acute mTOR inhibition induces insulin resistance and alters substrate utilization in vivo. Mol Metab. 2014 Jun 27;3(6):630-41.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

APExBIO Technology
www.apexbt.com
7505 Fannin street, Suite 410, Houston, TX 77054.
Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com