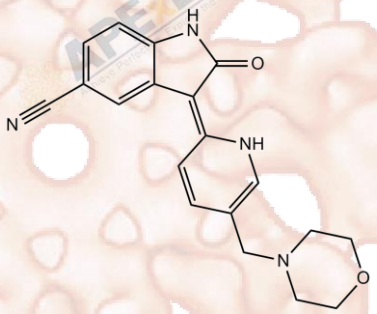
Product Data Sheet

AZD1080



Cat. No.:	B1536
CAS No.:	612487-72-6
Formula:	C19H18N4O2
M.Wt:	334.37
Synonyms:	
Target:	PI3K/Akt/mTOR Signaling
Pathway:	GSK-3
Storage:	Store at -20°C

Solvent & Solubility

In Vitro

insoluble in H2O; insoluble in EtOH; ⩾16.7 mg/mL in DMSO

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	2.9907 mL	14.9535 mL	29.9070 mL
5 mM	0.5981 mL	2.9907 mL	5.9814 mL
10 mM	0.2991 mL	1.4953 mL	2.9907 mL

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

Biological Activity

Shortsummary	GSK3βinhibitor
IC_{50} & Target	6.9 nM (Ki) (GSK-3α), 31 nM (Ki) (GSK-3β)

In Vitro

Cell Viability Assay

Cell Line:	3T3 fibroblasts engineered to stably express 4-repeat human tau
Preparation method：	Limited solubility. 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:	37°C

	Applications:	AZD1080 inhibits phosphorylation of human tau protein in a concatenation-dependent manner (IC50 = 324 nM). The non-selective reference GSK3 inhibitor LiCl (IC50 = 1.5 mM) indicating that AZD1080 is several orders of magnitude more potent than LiCl.
In Vivo	**Animal experiment**	
	Animal models:	11–12 days old male and female Sprague-Dawley rats
	Dosage form:	AZD1080 (3 or 10 lmol/kg); oral gavage (6 mL/kg).
	Applications:	6 h after administration of AZD1080, it inhibits the tau phosphorylation by maximal of 38±2% and 48±2% in hippocampus, indicating AZD1080 is effective at inhibiting tau phosphorylation at the P-Thr231 epitope, in a time- and dose-dependent manner in brain. In addition, AZD1080 reverses cognitive deficits in mice and rescues dysfunctional synapses.
	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

See more customer validations on www.apexbt.com.

References

1. Georgievska B, Sandin J, Doherty J et al. AZD1080, a novel GSK3 inhibitor, rescues synaptic plasticity deficits in rodent brain and exhibits peripheral target engagement in humans. J Neurochem. 2013 May;125(3):446-56.

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.

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