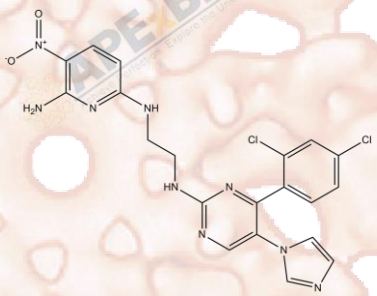
Product Data Sheet

CHIR-98014



Cat. No.:	A8395
CAS No.:	252935-94-7
Formula:	C20H17Cl2N9O2
M.Wt:	486.31
Synonyms:	
Target:	PI3K/Akt/mTOR Signaling
Pathway:	GSK-3
Storage:	Store at -20°C

Solvent & Solubility

In Vitro

insoluble in H2O; insoluble in EtOH; ⩾8.1 mg/mL in DMSO with gentle warming

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	2.0563 mL	10.2815 mL	20.5630 mL
5 mM	0.4113 mL	2.0563 mL	4.1126 mL
10 mM	0.2056 mL	1.0282 mL	2.0563 mL

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

Biological Activity

Shortsummary	GSK-3β inhibitor,selective and ATP-competitive
IC_{50} & Target	0.58 nM (GSK-3β), 0.65 nM (GSK-3α), >1 μM (p70 S6K)

In Vitro

Cell Viability Assay

Cell Line:	Insulin receptor– expressing CHO-IR cells and primary rat hepatocytes
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:	24h; EC50=106 nM (CHO-IR cells); EC50=107 nM (rat hepatocytes).

	Applications:	CHIR 98014 resulted in a stimulation of the GS activity ratio above basal. The concentrations of CHIR 98014 causing half-maximal GS stimulation (EC50) were 106 nM for CHO-IR cells and 107 nM for rat hepatocytes.
In Vivo	**Animal experiment**	
	Animal models:	Female db/db mice.
	Dosage form:	30 mg/kg; oral taken
	Applications:	Markedly diabetic and insulin-resistant db/db mice treated with 30 mg/kg CHIR 98014 exhibited a significant reduction in fasting hyperglycemia within 4 h of treatment and showed improved glucose disposal during an IPGTT.
	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] Ring D B, Johnson K W, Henriksen E J, et al. Selective glycogen synthase kinase 3 inhibitors potentiate insulin activation of glucose transport and utilization in vitro and in vivo[J]. Diabetes, 2003, 52(3): 588-595.

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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