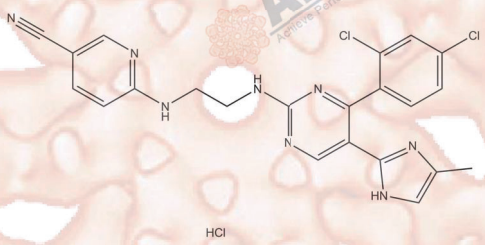
Product Data Sheet

CHIR-99021 (CT99021) HCl

Cat. No.: A8396
CAS No.: 1797989-42-4
Formula: C22H18Cl2N8·HCl
M.Wt: 501.8
Synonyms:
Target: PI3K/Akt/mTOR Signaling
Pathway: GSK-3
Storage: Store at -20°C



Solvent & Solubility

In Vitro

≧25.1mg/mL in DMSO

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1mg	5mg	10mg
1 mM	1.9928 mL	9.9641 mL	19.9283 mL
5 mM	0.3986 mL	1.9928 mL	3.9857 mL
10 mM	0.1993 mL	0.9964 mL	1.9928 mL

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

Biological Activity

Shortsummary	GSK-3α/β inhibitor
IC_{50} & Target	10 nM (GSK-3α), 6.7 nM (GSK-3β)

In Vitro

Cell Viability Assay

Cell Line:	CHO-IR cells or 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:	0.01 ~ 10 μM
Applications:	In CHO-IR cells or primary rat hepatocytes, CHIR-99021 dose-dependently

		resulted in a two- to three-fold stimulation of the GS activity ratio above basal. In CHO-IR cells, CHIR-99021 induced GS activation with the EC50 value of 0.763 μM.
In Vivo	**Animal experiment**	
	Animal models:	ZDF rats
	Dosage form:	16 or 48 mg/kg; p.o.
	Applications:	In ZDF rats, CHIR-99021 treatment (16 or 48 mg/kg; p.o.; 1 hr before oral glucose challenges) significantly improved glucose tolerance with 14% and 33% reduction in plasma glucose, respectively. Moreover, CHIR-99021 at a higher dose also reduced hyperglycemia before the oral glucose challenge.
	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 DB, Johnson KW, Henriksen EJ, Nuss JM, Goff D, Kinnick TR, Ma ST, Reeder JW, Samuels I, Slabiak T, Wagman AS, Hammond ME, Harrison SD. Selective glycogen synthase kinase 3 inhibitors potentiate insulin activation of glucose transport and utilization in vitro and in vivo. Diabetes. 2003 Mar;52(3):588-95.

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.