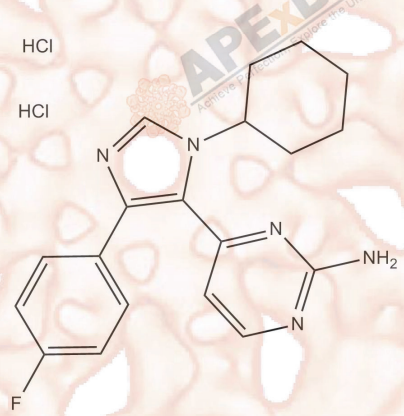
Product Data Sheet

PF-670462

Cat. No.:	A3719
CAS No.:	950912-80-8
Formula:	C19H22Cl2FN5
M.Wt:	410.32
Synonyms:	PF 670462;PF670462
Target:	Stem Cell
Pathway:	CK1
Storage:	Store at -20°C



Solvent & Solubility

In Vitro

⩾20.5 mg/mL in DMSO, ⩾20.8 mg/mL in EtOH with ultrasonic and warming, ⩾94 mg/mL in H2O with ultrasonic and warming

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	2.4371 mL	12.1856 mL	24.3712 mL
5 mM	0.4874 mL	2.4371 mL	4.8742 mL
10 mM	0.2437 mL	1.2186 mL	2.4371 mL

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

Biological Activity

Shortsummary	CK1 ε/δ inhibitor
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	Rat1 cells
Preparation method:	The solubility of this compound in DMSO is > 20.5 mg/mL. 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 ~ 50 μM

	Applications:	In Rat1 cells, PF-670462 significantly lengthened the circadian period. At the concentration as low as 1 μM, PF-670462 started to dramatically increase the circadian period in a dose-dependent manner. PF-670462 began to increase the period of the clock at approximately 3- to 10-fold over the whole-cell CK1δ IC50 and approximately 3-fold lower for CK1ε.
In Vivo	**Animal experiment**	
	Animal models:	C57BL/6J mice
	Dosage form:	32 mg/kg; s.c.; a single dose
	Applications:	After a single subcutaneous dose of 32 mg/kg PF-670462, the brain-to-plasma concentration ratio of PF-670462 was constant throughout the 24-hr time course, with an average value of 1.3. The free brain Cmax of PF-670462 was 3-fold above its CK1δ whole-cell IC50, along with a 0.7-fold CK1ε whole-cell IC50, which indicated that PF-670462 inhibited most of the CK1δ and CK1ε activity.
	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]. Walton KM, Fisher K, Rubitski D, et al. Selective inhibition of casein kinase 1 epsilon minimally alters circadian clock period. J Pharmacol Exp Ther, 2009, 330(2): 430-439.

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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