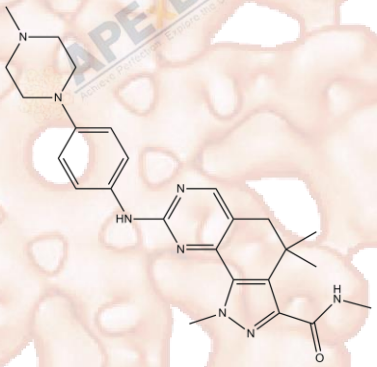
Product Data Sheet

PHA-848125



Cat. No.:	A8501
CAS No.:	802539-81-7
Formula:	C25H32N8O
M.Wt:	460.57
Synonyms:	
Target:	Cell Cycle/Checkpoint
Pathway:	Cyclin-Dependent Kinases
Storage:	Store at -20°C

Solvent & Solubility

In Vitro

≥23.05 mg/mL in DMSO; insoluble in EtOH; insoluble in H2O

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	2.1712 mL	10.8561 mL	21.7122 mL
5 mM	0.4342 mL	2.1712 mL	4.3424 mL
10 mM	0.2171 mL	1.0856 mL	2.1712 mL

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

Biological Activity

Shortsummary	CDK inhibitor,potent and ATP-competitive
IC_{50} & Target	45 nM (CDK2/CyclinA), 53 nM (TrkA), 150 nM (CDK7/CyclinH), 160 nM (CDK4/CyclinD1), 265 nM (CDK5/p35)

In Vitro

Cell Viability Assay

Cell Line:	GL-Mel cells
Preparation method：	The solubility of this compound in DMSO is > 23.1 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:	0.156 or 0.625 μM, 72 hours
	Applications:	Exposure of GL-Mel cells to 0.156 μM PHA-848125 induced a moderate increase in the G1 fraction with no significant changes concerning the S and the G2/M fractions. Treatment with 0.625 μM PHA-848125 caused instead a marked accumulation of the cells in the G1 phase, accompanied by a concomitant strong reduction of the percentage of cells in the S and G2/M phases. PHA-848125 slightly up-regulated the expression of p53 in GL-Mel cells. PHA-848125 showed antiproliferative activity against a panel of 145 tumor cell lines established from different solid tumors and a further 44 cell lines derived from leukemias and lymphomas.
In Vivo	**Animal experiment**	
	Animal models:	K-Ras(G12D)LA2 mice, human ovarian carcinoma A2780 xenografted mouse model, human xenograft tumors s.c. implanted in athymic mice
	Dosage form:	Oral administration, 40 mg/kg twice daily for 10 days
	Applications:	In the preclinical xenograft A2780 human ovarian carcinoma model, PHA-848125 showed good efficacy and was well tolerated upon repeated daily treatments. Treatment of K-Ras(G12D)LA2 mice with PHA-848125 (40 mg/kg twice daily for 10 days) resulted in significant tumor growth inhibition at the end of the treatment. PHA-848125 (40 mg/kg orally twice a day × 5 days, repeated for four cycles) significantly increased survival time in two models of human primary disseminated leukemias.
	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]. Caporali S, Alvino E, Starace G, et al. The cyclin-dependent kinase inhibitor PHA-848125 suppresses the in vitro growth of human melanomas sensitive or resistant to temozolomide, and shows synergistic effects in combination with this triazene compound[J]. Pharmacological research, 2010, 61(5): 437-448.

[2]. Albanese C, Alzani R, Amboldi N, et al. Dual targeting of CDK and tropomyosin receptor kinase families by the oral inhibitor PHA-848125, an agent with broad-spectrum antitumor efficacy[J]. Molecular cancer therapeutics, 2010, 9(8): 2243-2254.

[3]. Degrassi A, Russo M, Nanni C, et al. Efficacy of PHA-848125, a cyclin-dependent kinase inhibitor, on the K-RasG12DLA2 lung adenocarcinoma transgenic mouse model: evaluation by multimodality imaging[J]. Molecular cancer therapeutics, 2010, 9(3):

673-681.

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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