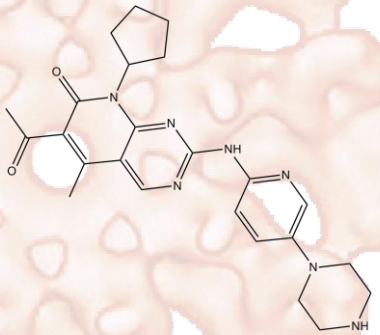
Product Data Sheet

PD 0332991 (Palbociclib)



Cat. No.:	B7798
CAS No.:	571190-30-2
Formula:	C24H29N7O2
M.Wt:	447.53
Synonyms:	PD0332991;PD-0332991;PD 0332991
Target:	Cell Cycle/Checkpoint
Pathway:	Cyclin-Dependent Kinases
Storage:	Store at -20°C

Solvent & Solubility

insoluble in EtOH; insoluble in H2O; insoluble in DMSO

In Vitro — Preparing Stock Solutions

Concentration \ Mass (Solvent)	1mg	5mg	10mg
1 mM	2.2345 mL	11.1724 mL	22.3449 mL
5 mM	0.4469 mL	2.2345 mL	4.4690 mL
10 mM	0.2234 mL	1.1172 mL	2.2345 mL

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

Biological Activity

Shortsummary	CDK4/6 inhibitor,highly selective
IC_{50} & Target	11 nM (CDK4/cyclin D1), 16 nM (CDK6/cyclin D2)

In Vitro

Cell Viability Assay

Cell Line:	MDA-MB-453 cells
Preparation method：	The solubility of this compound in DMSO is
Reacting conditions:	80 nM, 24 hours
Applications:	MDA-MB-453 breast carcinoma cells exposed to varying concentrations of PD 0332991 for 24 hours showed a significant increase in the percentage of cells

		in G1 in the presence of as little as 0.04 μmol/L PD 0332991 with a concomitant decline in other phases of the cell cycle. Maximum effects were attained at 0.08 μmol/L and an exclusive G1 arrest was maintained even at concentrations as high as 10 μmol/L, consistent with the complete absence of any other effects on the cell cycle.
In Vivo	**Animal experiment**	
	Animal models:	Mice bearing Colo-205 colon carcinoma xenografts
	Dosage form:	Oral administration, 150 or 75 mg/kg, daily for 14 days
	Applications:	Administration of PD 0332991 produced rapid tumor regressions and a corresponding tumor growth delay of about 50 days with >1 log of tumor cell kill at the highest dose tested. At 37.5 mg/kg, the tumor slowly regressed during treatment. Even at doses as low as 12.5 mg/kg, a 13-day growth delay was obtained indicating a 90% inhibition of tumor growth rate.
	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

1. Cingöz O, Goff SP. "Cyclin-dependent kinase activity is required for type Iinterferon production." Proc Natl Acad Sci U S A. 2018 Mar 27;115(13):E2950-E2959.PMID:29507205

See more customer validations on www.apexbt.com.

References

[1] Fry D W, Harvey P J, Keller P R, et al. Specific inhibition of cyclin-dependent kinase 4/6 by PD 0332991 and associated antitumor activity in human tumor xenografts. Molecular cancer therapeutics, 2004, 3(11): 1427-1438.

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.

APExBIO Technology
www.apexbt.com
7505 Fannin street, Suite 410, Houston, TX 77054.
Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com