



## Product Information

Product ID P0344

CAS No. 827022-33-3

**Chemical Name**

Synonym PD0332991-0054, PF00080665-73

Formula  $C_{24}H_{29}N_7O_2 \cdot C_2H_6O_4S$

Formula Wt. 573.66

**Melting Point**

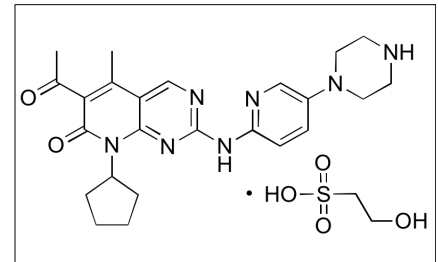
Purity  $\geq 98\%$

Solubility Water 10 mg/mL warmed  
(17.43 mM)  
DMSO Insoluble  
Ethanol Insoluble

Store Temp  $-20^{\circ}C$

Ship Temp Ambient

**Description** Palbociclib is an inhibitor of CDK4 and CDK6 that displays anticancer chemotherapeutic and nephroprotective activities; it is currently in clinical trials as a potential treatment for breast cancer. Palbociclib induces G0/G1 phase cell cycle arrest in renal proximal tubule cells, protecting animals against nephrotoxicity and inflammation induced by other chemotherapeutics. Palbociclib also induces cell cycle arrest in cellular and animal models of glioma, increasing overall survival times. In animal models of retinoblastoma, this compound inhibits cell proliferation, and induces G1 phase cell cycle arrest and tumor regression.



**Bulk quantities available upon request**

Product ID	Size
P0344	5 mg
P0344	10 mg
P0344	25 mg

**References** Vaughn DJ, Hwang W, Lal P, et al. Phase 2 trial of the cyclin-dependent kinase 4/6 inhibitor palbociclib in patients with retinoblastoma protein-expressing germ cell tumors. *Cancer*. 2014 Dec 18. [Epub ahead of print]. PMID: 25522918.

DiRocco DP, Bisi J, Roberts P, et al. CDK4/6 inhibition induces epithelial cell cycle arrest and ameliorates acute kidney injury. *Am J Physiol Renal Physiol*. 2014 Feb 15;306(4):F379-88. PMID: 24338822.

Barton KL, Misuraca K, Cordero F, et al. PD-0332991, a CDK4/6 inhibitor, significantly prolongs survival in a genetically engineered mouse model of brainstem glioma. *PLoS One*. 2013 Oct 2;8(10):e77639. PMID: 24098593.

Fry DW, Harvey PJ, Keller PR, et al. Specific inhibition of cyclin-dependent kinase 4/6 by PD 0332991 and associated antitumor activity in human tumor xenografts. *Mol Cancer Ther*. 2004 Nov;3(11):1427-38. PMID: 15542782.

**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.