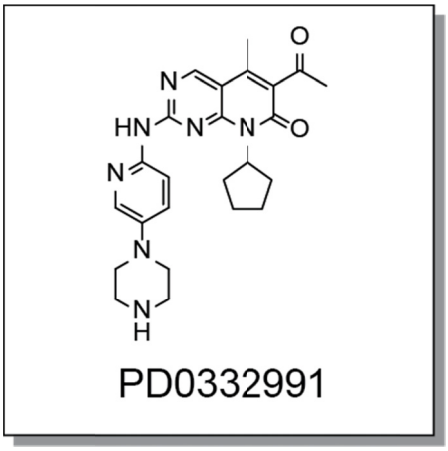
Product Specification Sheet

Product Name: PD0332991

Catalog Number: C7306-2 (powder)
C7306-2s (10mM in DMSO)

Package Size: 2 mg



Technical information:

Chemical Formula:	$C_{24}H_{29}N_7O_2$
CAS #:	571190-30-2
Molecular Weight:	447.53
Purity:	>98%
Formulation:	White solide
Solubility:	Soluble in DMSO up to 100 mM
Chemical Name:	6-acetyl-8-cyclopentyl-5-methyl-2-((5-(piperazin-1-yl)pyridin-2-yl)amino)pyrido[2,3-d]pyrimidin-7(8H)-one
Storage:	Store solid powder at 4°C desiccated; Store DMSO solution at -20°C.

Handling:

- For C7306-2 (powder), add 447 uL of DMSO to make 10 mM solution.
- For C7306-2s, before open the vial, centrifuge the vial at 500rpm x 1 min in a 50 mL conical tube to ensure full recovery of sample.

Biological Activity: PD 0332991 is a highly specific inhibitor of cyclin-dependent kinase 4 (Cdk4) (~0.011 μM) and Cdk6 (~0.016 μM), having no activity against a panel of 36 additional protein kinases. PD0332991 causes elimination of phospho-Rb and the proliferative marker Ki-67 in tumor tissue and downregulation of genes under the transcriptional control of E2F. It has showed significant inhibition in a broad spectrum of human tumor xenografts in vivo.

Reference:

1. Fry DW, 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;3(11):1427-38
2. Eline Menu, et al. A Novel Therapeutic Combination Using PD 0332991 and Bortezomib: Study in the 5T33MM Myeloma Model. Cancer Res 2008;68:5519-5523
3. Finn RS, et al. PD 0332991, a selective cyclin D kinase 4/6 inhibitor, preferentially inhibits proliferation of luminal estrogen receptor-positive human breast cancer cell lines in vitro. Breast Cancer Res. 2009;11(5):R77.

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