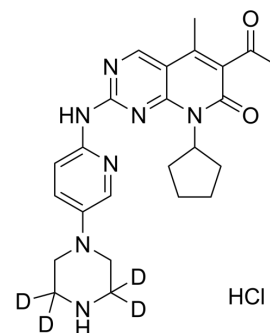


## Palbociclib-d<sub>4</sub> hydrochloride

<b>Cat. No.:</b>	HY-50767S1
<b>Molecular Formula:</b>	C <sub>24</sub> H <sub>26</sub> D <sub>4</sub> ClN <sub>7</sub> O <sub>2</sub>
<b>Molecular Weight:</b>	488.02
<b>Target:</b>	CDK; Isotope-Labeled Compounds
<b>Pathway:</b>	Cell Cycle/DNA Damage; Others
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Palbociclib-d <sub>4</sub> (hydrochloride) is the deuterium labeled Palbociclib hydrochloride. Palbociclib (PD 0332991) is a selective CDK4 and CDK6 inhibitor with IC50s of 11 and 16 nM, respectively. Palbociclib has the potential for ER-positive and HER2-negative breast cancer research[1].
<b>In Vitro</b>	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216.
- [2]. 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 Nov;3(11):1427-38.
- [3]. Katsumi Y, et al. Sensitivity of malignant rhabdoid tumor cell lines to PD 0332991 is inversely correlated with p16 expression. *Biochem Biophys Res Commun.* 2011, 413(1), 62-68.
- [4]. Goel S, et al. CDK4/6 inhibition triggers anti-tumour immunity. *Nature.* 2017 Aug 24;548(7668):471-475.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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