# Abemaciclib-$d_8$

**Cat. No.:** HY-16297AS

**CAS No.:** 2088650-53-5

**Molecular Formula:** $C_{27}H_{24}D_8F_2N_8$

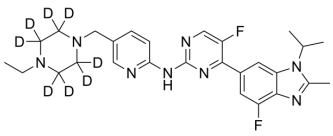
**Molecular Weight:** 514.64

**Target:** CDK

**Pathway:** Cell Cycle/DNA Damage

**Storage:**

| | | |
|---|---|---|
| Powder | -20°C | 3 years |
| | 4°C | 2 years |
| In solvent | -80°C | 6 months |
| | -20°C | 1 month |



## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 5 mg/mL (9.72 mM; ultrasonic and warming and heat to 60°C)

| Preparing Stock Solutions | Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 1.9431 mL | 9.7155 mL | 19.4311 mL |
| | 5 mM | 0.3886 mL | 1.9431 mL | 3.8862 mL |
| | 10 mM | --- | --- | --- |

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

## BIOLOGICAL ACTIVITY

**Description**

Abemaciclib-$d_8$ is the deuterium labeled Abemaciclib. Abemaciclib (LY2835219) is a selective CDK4/6 inhibitor with IC50 values of 2 nM and 10 nM for CDK4 and CDK6, respectively.

**In Vitro**

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[1].

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]. Ku BM, et al. The CDK4/6 inhibitor LY2835219 has potent activity in combination with mTOR inhibitor in head and neck squamous cell carcinoma. Oncotarget.?2016 Mar 22;7(12):14803-13.

[3]. Yadav V, et al. The CDK4/6 inhibitor LY2835219 overcomes PLX4032 resistance resulting from MAPK reactivation and cyclin D1 upregulation. Mol Cancer Ther. 2014 Oct;13(10):2253-63.

[4]. Gelbert LM, et al. Preclinical characterization of the CDK4/6 inhibitor LY2835219: in-vivo cell cycle-dependent/independent anti-tumor activities alone/in combination with NSC 613327. Invest New Drugs. 2014 Oct;32(5):825-37.



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