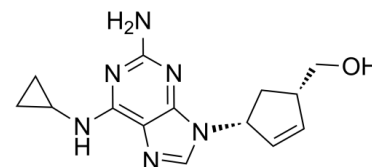


## Data Sheet

<b>Product Name:</b>	Abacavir
<b>Cat. No.:</b>	CS-1354
<b>CAS No.:</b>	136470-78-5
<b>Molecular Formula:</b>	C <sub>14</sub> H <sub>18</sub> N <sub>6</sub> O
<b>Molecular Weight:</b>	286.33
<b>Target:</b>	Apoptosis; HIV; Reverse Transcriptase; Telomerase
<b>Pathway:</b>	Anti-infection; Apoptosis; Cell Cycle/DNA Damage
<b>Solubility:</b>	DMSO : 100 mg/mL (349.25 mM; Need ultrasonic); H <sub>2</sub> O : 2 mg/mL (6.98 mM; Need ultrasonic)



### BIOLOGICAL ACTIVITY:

Abacavir is an orally active and competitive **nucleoside reverse transcriptase** inhibitor. Abacavir can inhibit the replication of **HIV**. Abacavir shows anticancer activity in prostate cancer cell lines. Abacavir can cross the blood-brain-barrier and suppresses **telomerase** activity<sup>[1][2][3]</sup>. **In Vitro:** Abacavir (15 and 150 μM, 0-120 h) inhibits cell growth, affects cell cycle progression, induces senescence and modulates LINE-1 mRNA expression in prostate cancer cell lines<sup>[1]</sup>.

Abacavir (15 and 150 μM, 18 h) significantly reduces cell migration and inhibits cell invasion<sup>[1]</sup>.

Abacavir induces fat apoptosis<sup>[4]</sup>. **In Vivo:** Abacavir (100 and 200 mg/kg, p.o.; 4 h) dose-dependently promoted thrombus formation<sup>[2]</sup>.

Abacavir (50 mg/kg/d; i.p.; 14 d) with 0.1 mg/kg/d Decitabine (HY-A0004) enhances survival of high-risk medulloblastoma-bearing mice<sup>[3]</sup>.

### References:

[1]. Carlini F, et al. The reverse transcription inhibitor abacavir shows anticancer activity in prostate cancer cell lines. PLoS One. 2010 Dec 3;5(12):e14221.

[2]. Collado-Diaz V, et al. Abacavir Induces Arterial Thrombosis in a Murine Model. J Infect Dis. 2018 Jun 20;218(2):228-233.

[3]. Gringmuth M, et al. Enhanced Survival of High-Risk Medulloblastoma-Bearing Mice after Multimodal Treatment with Radiotherapy, Decitabine, and Abacavir. Int J Mol Sci. 2022 Mar 30;23(7):3815.

[4]. McComsey GA, et al. Improvements in lipotrophy, mitochondrial DNA levels and fat apoptosis after replacing stavudine with abacavir or zidovudine. AIDS. 2005 Jan 3;19(1):15-23.

### CAIndexNames:

2-Cyclopentene-1-methanol, 4-[2-amino-6-(cyclopropylamino)-9H-purin-9-yl]-, (1S,4R)-

### SMILES:

NC1=NC(NC2CC2)=C3N=CN([C@H]4C=C[C@@H](CO)C4)C3=N1

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

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