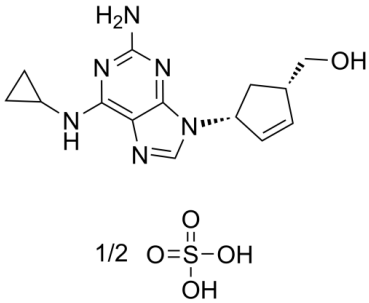
Data Sheet

Product Name:	Abacavir (sulfate)
Cat. No.:	CS-2023
CAS No.:	188062-50-2
Molecular Formula:	$C_{14}H_{18}N_6O.1/2H_2O_4S$
Molecular Weight:	335.38
Target:	Apoptosis; HIV; Reverse Transcriptase; Telomerase
Pathway:	Anti-infection; Apoptosis; Cell Cycle/DNA Damage
Solubility:	DMSO : 50 mg/mL (115.35 mM; Need ultrasonic); H2O : 33.33 mg/mL (76.89 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

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

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

Abacavir sulfate induces fat apoptosis[4]. **In Vivo:** Abacavir (0-7.5 μg/mL, 100 μL, intrascrotal administration; 100 and 200 mg/kg, p.o.; 4 h) sulfate dose-dependently promoted thrombus formation[2].

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

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 lipoatrophy, 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)-, sulfate (2:1)

SMILES:

O=S(O)(O)=O.NC1=NC(NC2CC2)=C3N=CN([C@H]4C=C[C@@H](CO)C4)C3=N1.[1/2]

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

Tel: 610-426-3128 Fax: 888-484-5008 E-mail: sales@ChemScene.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA