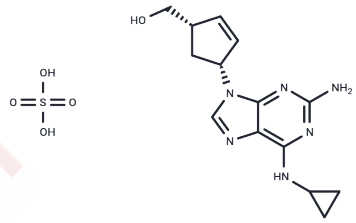
Data Sheet (Cat.No.T61679)

TargetMol

Abacavir monosulfate

Chemical Properties



CAS No. :	216699-07-9
Formula:	C14H20N6O5S
Molecular Weight:	384.41
Storage:	Powder: -20°C for 3 years | In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.

Biological Description

Description	Abacavir monosulfate is an orally active, competitive nucleoside reverse transcriptase inhibitor that effectively inhibits HIV replication. Additionally, it exhibits anticancer properties in prostate cancer cell lines, and has the ability to penetrate the blood-brain-barrier and suppress telomerase activity [1] [2] [3].
Targets(IC50)	Apoptosis,Others,HIV Protease,Reverse Transcriptase,Telomerase
In vitro	Abacavir monosulfate, at concentrations of 15 and 150 μM, exhibits diverse biological activities against prostate cancer cell lines, including growth inhibition, cell cycle alteration, senescence induction, and modulation of LINE-1 mRNA expression over a period of 0-120 hours [1]. Furthermore, it significantly reduces cell migration and invasion after an 18-hour treatment period at the same concentrations [1]. Additionally, in cell proliferation assays involving the PC3, LNCaP, and WI-38 cell lines, abacavir demonstrated a dose-dependent inhibition of growth. Cell cycle analysis revealed a pronounced accumulation of cells in the S phase, with an observed increase in the G2/M phase for PC3 cells when treated with 150 μM for periods ranging from 0 to 120 hours. Both cell migration and invasion assays reported considerable reductions in these processes in PC3 and LNCaP cells treated with 15 and 150 μM for 18 hours [1]. Moreover, abacavir monosulfate has been shown to induce fat apoptosis [4].
In vivo	Abacavir monosulfate administered in varying doses (0-7.5 μg/mL, 100 μL intrascrotally or 100 and 200 mg/kg orally for 4 hours) demonstrated a dose-dependent enhancement in thrombus formation [2]. Further, a combination treatment of Abacavir monosulfate (50 mg/kg/day) and Decitabine (0.1 mg/kg/day) via intraperitoneal injection for 14 days was found to inhibit tumor growth and extend survival in mice bearing high-risk medulloblastoma [3]. The first animal model utilized male C57BL/6 mice, either wild-type or P2rx7 homozygous knockout, aged 9-weeks and weighing 22-30 g, to study thrombosis [2]. The second model employed NSG TM mice implanted with patient-derived xenograft cells from Group 3 non-WNT/non-SHH or SHH/TP53-mutated medulloblastoma to assess the treatment's efficacy on tumor growth and survival enhancement [3].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6014 mL	13.0069 mL	26.0139 mL
5 mM	0.5203 mL	2.6014 mL	5.2028 mL
10 mM	0.2601 mL	1.3007 mL	2.6014 mL
50 mM	0.052 mL	0.2601 mL	0.5203 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.