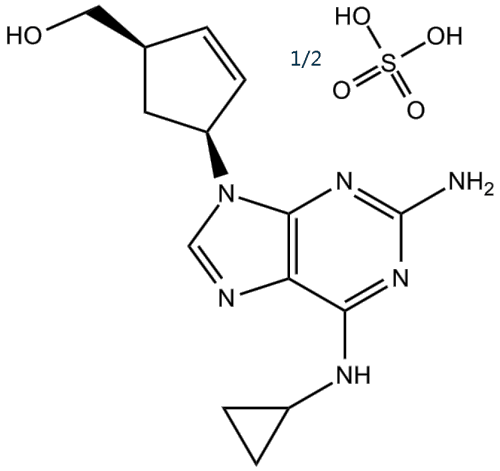
Product Data Sheet

Product Name: Abacavir sulfate
Cat. No.: GC11274

Chemical Properties

Cas. No.	188062-50-2		
Chemical Name	[(1S,4R)-4-[2-amino-6-(cyclopropylamino)purin-9-yl]cyclopent-2-en-1-yl]methanol;sulfuric acid		
SMILES	C1CC1NC2=NC(=NC3=C2N=CN3C4CC(C=C4)CO)N.OS(=O)(=O)O		
Formula	$C_{14}H_{18}N_6O.1/2H_2SO_4$	M.Wt	335.35
Solubility	≥ 12.3mg/mL in Water	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		

Structure



Background

Abacavir sulfate (ABC) is a powerful nucleoside analog reverse transcriptase inhibitor (NRTI) used to treat HIV and AIDS. Target: NRTIAbacavir is a nucleoside reverse transcriptase inhibitor marketed since 1999 for the treatment of infection with the human immunodeficiency virus type 1 (HIV). Despite its clinical efficacy, abacavir administration has been associated with serious and sometimes fatal toxic events. Abacavir has been reported to undergo bioactivation in vitro, yielding reactive species

that bind covalently to human serum albumin, but the haptenation mechanism and its significance to the toxic events induced by this anti-HIV drug have yet to be elucidated. The mechanism underlying abacavir hypersensitivity syndrome is related to the change in the HLA-B*5701 protein product. Abacavir binds with high specificity to the HLA-B*5701 protein, changing the shape and chemistry of the antigen-binding cleft. This results in a change in immunological tolerance and the subsequent activation of abacavir-specific cytotoxic T cells, which produce a systemic reaction known as abacavir hypersensitivity syndrome.

References:
[1]. Charneira C, et al. Reactive aldehyde metabolites from the anti-HIV drug abacavir: amino acid adducts as possible factors in abacavir toxicity. Chem Res Toxicol. 2011 Dec 19;24(12):2129-41.
[2]. Hervey PS, et al. Abacavir: a review of its clinical potential in patients with HIV infection. Drugs. 2000 Aug;60(2):447-79.