

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

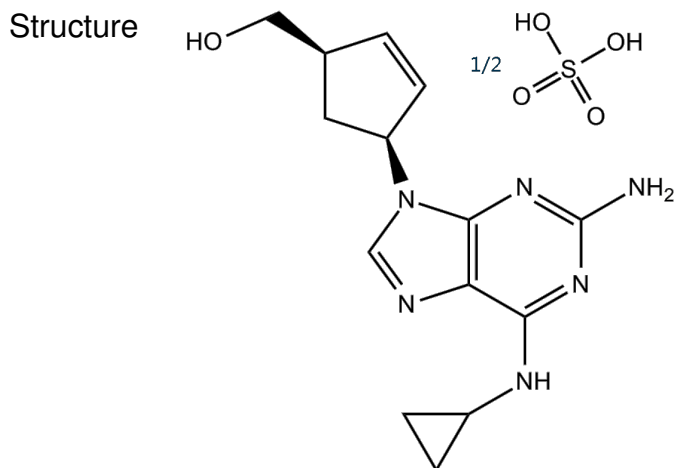
SMILES C1CC1NC2=NC(=NC3=C2N=CN3C4CC(C=C4)CO)N.OS(=O)(=O)O

Formula $C_{14}H_{18}N_6O \cdot 1/2 H_2SO_4$ M.Wt 335.35

Solubility $\geq 12.3 \text{ mg/mL}$ 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.



Background

Abacavir sulfate (ABC) is a powerful nucleoside analog reverse transcriptase inhibitor (NRTI) used to treat HIV and AIDS. Target: NRTI. Abacavir 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

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

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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.

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