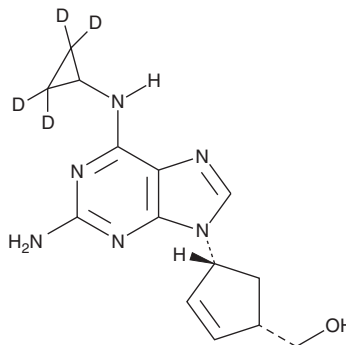


# PRODUCT INFORMATION



## Abacavir-d<sub>4</sub> Item No. 30076

**CAS Registry No.:** 1260619-56-4  
**Formal Name:** (1S,4R)-4-[2-amino-6-(cyclopropyl-2,2,3,3-d<sub>4</sub>-amino)-9H-purin-9-yl]-2-cyclopentene-1-methanol  
**MF:** C<sub>14</sub>H<sub>14</sub>D<sub>4</sub>N<sub>6</sub>O  
**FW:** 290.4  
**Chemical Purity:** ≥98% (Abacavir)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>4</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Abacavir-d<sub>4</sub> is intended for use as an internal standard for the quantification of abacavir (Item No. 14746) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Abacavir-d<sub>4</sub> is supplied as a solid. A stock solution may be made by dissolving the abacavir-d<sub>4</sub> in the solvent of choice, which should be purged with an inert gas. Abacavir-d<sub>4</sub> is soluble in DMSO and a 1:1 solution of acetonitrile:methanol.

### Description

Abacavir is a nucleoside analog and an inhibitor of HIV-1 reverse transcriptase ( $K_i = 2.1 \mu\text{M}$  for the wild-type enzyme).<sup>1</sup> It inhibits replication of a variety of HIV-1 and HIV-2 strains, including strains resistant to 3'-azido-3'-deoxythymidine (zidovudine; Item No. 15492) or 2',3'-dideoxyinosine (didanosine; Item No. 23715), in HeLa cells stably expressing CD4 ( $IC_{50}$ s = 5.8-21  $\mu\text{M}$ ). Abacavir inhibits replication of eight HIV-1 clinical isolates in phytohemagglutinin-stimulated isolated human peripheral blood lymphocytes with a mean  $IC_{50}$  value of 0.26  $\mu\text{M}$ . It inhibits hepatitis B virus (HBV) DNA synthesis in HepG2 cells ( $IC_{50} = 7 \mu\text{M}$ ) and is also active against human cytomegalovirus (CMV) strain AD169 and the Petaluma strain of feline immunodeficiency virus (FIV) in plaque reduction assays ( $IC_{50}$ s = 32 and 0.4  $\mu\text{M}$ , respectively). Formulations containing abacavir have been used in the treatment of HIV infection.

### Reference

1. Daluge, S.M., Good, S.S., Faletto, M.B., *et al.* 1592U89, a novel carbocyclic nucleoside analog with potent, selective anti-human immunodeficiency virus activity. *Antimicrob. Agents Chemother.* **41**(5), 1082-1093 (1997).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/04/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897

[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM