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Produktinformation



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Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
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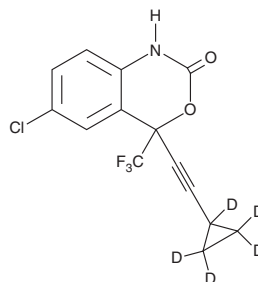
PRODUCT INFORMATION



(±)-Efavirenz-d₅

Item No. 25228

CAS Registry No.: 2749807-27-8
Formal Name: 6-chloro-4-((cyclopropyl-d₅)ethynyl)-4-(trifluoromethyl)-1,4-dihydro-2H-benzo[d][1,3]oxazin-2-one
Synonyms: DMP 266-d₅, EFV-d₅, L-743,726-d₅
MF: C₁₄H₄ClD₅F₃NO₂
FW: 320.7
Chemical Purity: ≥95% (Efavirenz)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₅); ≤1% d₀
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

(±)-Efavirenz-d₅ is intended for use as an internal standard for the quantification of efavirenz (Item No. 14412) 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).

(±)-Efavirenz-d₅ is supplied as a solid. A stock solution may be made by dissolving the (±)-efavirenz-d₅ in the solvent of choice, which should be purged with an inert gas. (±)-Efavirenz-d₅ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of (±)-efavirenz-d₅ in ethanol and DMF is approximately 20 mg/ml and approximately 14 mg/ml in DMSO.

Description

Efavirenz is a non-nucleoside reverse transcriptase inhibitor (NNRTI) that binds to wild-type and mutant HIV-1 RTs (K_is = 2.93 and 3.85-56.5 nM, respectively).¹ It inhibits wild-type and mutant HIV-1 viral replication in MT-4 human T lymphoid cells (IC₉₅s = 1.5-1,500 nM). Efavirenz also prevents RNA plus-strand initiation with an IC₅₀ value of 17 nM.² *In vivo*, efavirenz reduces HIV-1 cDNA in spleen of HIV-1-challenged HIV-susceptible transgenic rats.³ Formulations containing efavirenz have been used in combination therapy for the treatment of HIV-1.^{4,5}

References

1. Young, S.D., Britcher, S.F., Tran, L.O., *et al.* L-743,726 (DMP-266): A novel, highly potent nonnucleoside inhibitor of the human immunodeficiency virus type 1 reverse transcriptase. *Antimicrob. Agents Chemother.* **39**(12), 2602-2605 (1995).
2. Grobler, J.A., Dornadula, G., Rice, M.R., *et al.* HIV-1 reverse transcriptase plus-strand initiation exhibits preferential sensitivity to non-nucleoside reverse transcriptase inhibitors *in vitro*. *J. Biol. Chem.* **282**(11), 8005-8010 (2007).
3. Goffinet, C., Allespach, I., and Keppler, O.T. HIV-susceptible transgenic rats allow rapid preclinical testing of antiviral compounds targeting virus entry or reverse transcription. *Proc. Natl. Acad. Sci. USA* **104**(3), 1015-1020 (2007).
4. Sheran, M. The nonnucleoside reverse transcriptase inhibitors efavirenz and nevirapine in the treatment of HIV. *HIV Clin. Trials* **6**(3), 158-168 (2005).
5. Rakhmanina, N.Y. and van den Anker, J.N. Efavirenz in the therapy of HIV infection. *Expert Opin. Drug Metab. Toxicol.* **6**(1), 95-103 (2010).

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.

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