

Product Data Sheet

Product Name: Lopinavir-d8

Cat. No.: GC47573

Chemical Properties

Cas. No. 1322625-54-6

SMILES O=C1NCCCN1C(C(C([2H])([2H])[2H])([2H])C([2H])([2H])[2H])([2H])C(N[C@@H](CC2=CC=CC=C2)C[C@H](O)[C@H](CC3=CC=CC=C3)NC(COC4=C(C)C=CC=C4C)=O)=O

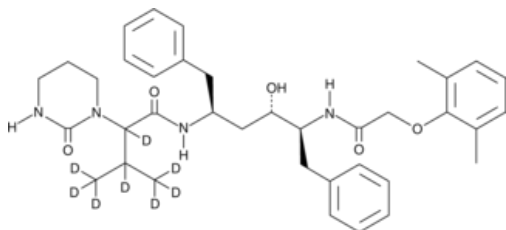
Formula C₃₇H₄₀D₈N₄O₅ M.Wt 636.9

Solubility Chloroform: Slightly Storage Store at -20°C
Soluble, Methanol: Slightly Soluble

General 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 Evaluation sample solution : ship with blue ice All other available size: ship with RT, or Condition blue ice upon request.

Structure



Background

Lopinavir-d₈ is intended for use as an internal standard for the quantification of lopinavir by GC- or LC-MS. Lopinavir is a potent HIV-1 protease inhibitor ($K_i = 1.3$ pM for wild-type enzyme).¹ It inhibits the replication of clinical isolates of HIV-1 (EC_{50} s = 5-52 nM). Lopinavir reduces the infectious virus yield and viral RNA copy numbers in the culture supernatant of Vero E6 cells infected with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2; EC_{50} s = 26.63 and 26.10 μM, respectively).² It reduces lung and kidney viral load, bronchointerstitial pneumonia, and pulmonary inflammatory cell infiltration in a marmoset model of Middle East respiratory syndrome coronavirus (MERS-CoV) infection when administered in combination with ritonavir.³

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

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Address: 10292 Central Ave. #205, Montclair, CA, USA

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1. Sham, H.L., Kempf, D.J., Molla, A., et al. ABT-378, a highly potent inhibitor of the human immunodeficiency virus protease. *Antimicrob. Agents Chemother.* 42(12):3218-3224 (1998)

2. Choy, K.-T., Wong, A.-Y., Kaewpreedee, P., et al. Remdesivir, lopinavir, emetine, and homoharringtonine inhibit SARS-CoV-2 replication in vitro. *Antiviral Res.* 178:104786 (2020)

3. Chan, J.-F., Yao, Y., Yeung, M.-L., et al. Treatment with lopinavir/ritonavir or interferon- β 1b improves outcome of MERS-CoV infection in a nonhuman primate model of common marmoset. *J. Infect. Dis.* 212(12):1904-1913 (2015)

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