

Product Data Sheet

Product Name: Everolimus-d₄

Cat. No.: GC47328

Chemical Properties

Cas. No. 1338452-54-2

SMILES O=C([C@]1([H])CCCCN1C(C([C@@]2(O)[C@H](C)CC[C@](C[C@H](OC)/C(C)=C/C=C/C/C=C/[C@H](C3)C)([H])O2)=O)=O)O[C@](CC([C@H](C)/C=C(C)/[C@@H](O)[C@@H](OC)C([C@@H]3C)=O)=O)([H])[C@H](C)C[C@H]4C[C@@H](OC)[C@H](OC([2H])([2H])C([2H])([2H])O)CC4

Formula C₅₃H₇₉D₄NO₁₄

M.Wt 962.3

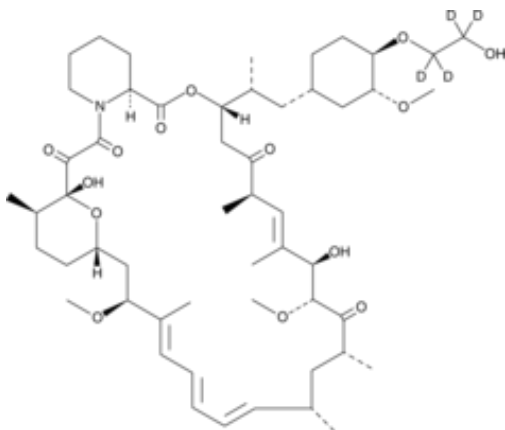
Solubility Chloroform: Soluble, Methanol: Soluble

Storage Store at 4°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

Everolimus-d₄ is intended for use as an internal standard for the quantification of everolimus by GC- or LC-MS. Everolimus is a hydroxyethyl ether form of rapamycin that inhibits mTOR signaling through both mTORC1 and mTORC2 when added to cells at 20 nM.^{1,2} It is orally available and shows improved pharmacokinetics and pharmacodynamics over rapamycin.² Through its inhibition of

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mTOR, everolimus inhibits cell proliferation, metabolism, and angiogenesis in certain types of cancer.^{3,4} It also acts as an immunosuppressive agent in the context of organ transplantation.

1.Zeng, Z., Sarbassov, D.D., Samudio, I.J., et al.Rapamycin derivatives reduce mTORC2 signaling and inhibit AKT activation in AMLBlood109(8)3509-3512(2007) 2.Lebwohl, D., Anak, Ö., Sahmoud, T., et al.Development of everolimus, a novel oral mTOR inhibitor, across a spectrum of diseasesAnn. N.Y. Acad. Sci.129114-32(2013) 3.Yunokawa, M., Koizumi, F., Kitamura, Y., et al.Efficacy of everolimus, a novel mTOR inhibitor, against basal-like triple-negative breast cancer cellsCancer Sci.103(9)1665-1671(2012) 4.Gurk-Turner, C., Manitpisitkul, W., and Cooper, M.A comprehensive review of everolimus clinical reports: A new mammalian target of rapamycin inhibitorTransplantation94(7)659-668(2012)

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