

Product Data Sheet

Product Name: Rapamycin-d3

Cat. No.: GC48027

Chemical Properties

Cas. No. 392711-19-2

SMILES O=C(C(N1[C@H](C(O[C@H]([C@H](C)C[C@@H]2CC[C@@H](O)[C@H](OC)C2)CC([C@H](C)/C=C(C)/[C@@H](O)[C@@H](OC)C([C@@H]3C)=O)=O)=O)CCCC1)=O)[C@@]4(O)O[C@H](C[C@H](OC([2H])([2H])[2H])/C(C)=C/C=C/C=C/[C@@H](C)C3)CC[C@H]4C

Formula C₅₁H₇₆D₃NO₁₃

M.Wt 917.2

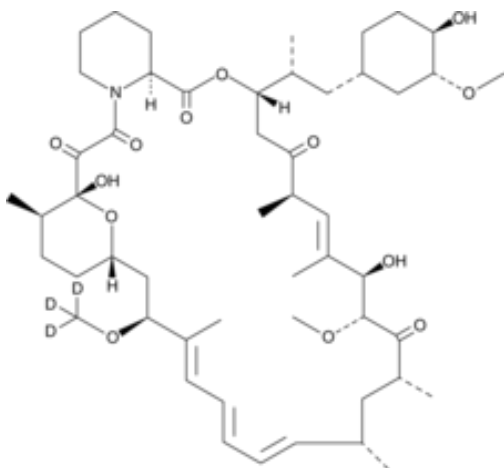
Solubility Chloroform: 5 mg/ml, DMSO: 25 mg/ml, Ethanol: 50 mg/ml, Methanol: 25 mg/ml

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.

Structure



Background

Rapamycin-d₃ is intended for use as an internal standard for the quantification of rapamycin by GC- or LC-MS. Rapamycin is an allosteric inhibitor of the mammalian target of rapamycin (mTOR).

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

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complex 1 (mTORC1).¹ It interacts with FKBP prolyl isomerase 1A (FKBP12) to form a complex that binds to and inhibits the kinase activity of mTORC1. Rapamycin inhibits growth of Rh1 and Rh30 rhabdomyosarcoma cells in serum-free medium, with 50% inhibition observed at concentrations of 0.1 and 0.5 ng/ml, respectively, and increases apoptosis in these cells at 100 ng/ml.² It also induces autophagy in a variety of cell types.¹ Rapamycin inhibits IL-2-induced proliferation of IL-2-dependent T cells by 50% when used at concentrations less than 5 pM.³ Formulations containing rapamycin have been used as immunosuppressive agents in the prevention of organ transplant rejection.

1.Kim, Y.C., and Guan, K.-L.mTOR: A pharmacological target for autophagy regulationJ. Clin. Invest.125(1)25-32(2015) 2.Hosoi, H., Dilling, M.B., Shikata, T., et al.Rapamycin causes poorly reversible inhibition of mTOR and induces p53-independent apoptosis in human rhabdomyosarcoma cellsCancer Res.59(4)886-894(1999) 3.Kay, J.E., Kromwel, L., Doe, S.E.A., et al.Inhibition of T and B lymphocyte proliferation by rapamycinImmunology72(4)544-549(1991)

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