

Product Data Sheet

Product Name: Minoxidil-d10

Cat. No.: GC47679

Chemical Properties

Cas. No. 1020718-66-4

SMILES NC1=[N+](O-)[C(N)=NC(N2C([2H])([2H])C([2H])([2H])C([2H])([2H])C([2H])([2H])C2([2H])[2H])=C1

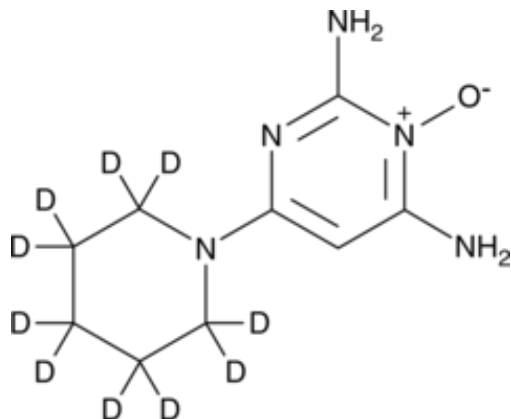
Formula C₉H₅D₁₀N₅O M.Wt 219.3

Solubility DMF: 2 mg/ml, DMSO: 2 mg/ml, Ethanol: 5 mg/ml, PBS (pH 7.2): 2 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

Minoxidil-d₁₀ contains 10 deuterium atoms on the piperidine ring. It is intended for use as an internal standard for the quantification of minoxidil by GC- or LC-mass spectrometry. Minoxidil is a pyrimidine derivative that was originally developed as an anti-hypertensive agent and unexpectedly found to stimulate hair growth. Minoxidil directly affects arteriolar smooth muscle to decrease vascular resistance in part by opening ATP-sensitive potassium channels.^{1,2} It can activate cyclooxygenase 1

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

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(AC₅₀ = 80 µM), which is expressed in the dermal papilla of hair follicles, increasing prostaglandin E₂ production in BALB/c 3T3 fibroblasts and human dermal papilla fibroblasts.³

1.Limas, C.J., and Cohn, J.N.Stimulation of vascular smooth muscle sodium, potassium--adenosinetriphosphatase by vasodilatorsCirculation Research35(4)601-607(1974) 2.Imenshahidi, M., Hadizadeh, F., Firoozeh-Moghadam, A., et al.Synthesis and vasorelaxant effect of 9-aryl-1,8-acridinediones as potassium channel openers in isolated rat aortalran.J.Pharm.Res.11(1)229-233(2012) 3.Michelet, J.F., Commo, S., Billoni, N., et al.Activation of cytoprotective prostaglandin synthase-1 by minoxidil as a possible explanation for its hair growth-stimulating effectJournal of Investigative Dermatology108205-209(1997)

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