

Product Data Sheet

Product Name: Ornidazole-d5

Cat. No.: GC48908

Chemical Properties

Cas. No. 2747915-64-4

SMILES OC(C([2H])([2H])Cl)([2H])C([2H])([2H])N1C(C)=NC=C1[N+][O-]=O

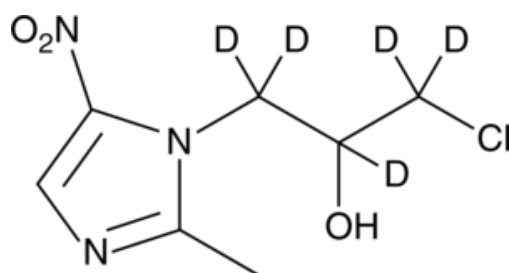
Formula C7H5D5ClN3O3 M.Wt 224.7

Solubility DMSO: soluble, Methanol: soluble Storage -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 sizes: ship with RT, or blue ice upon request.

Structure



Background

Ornidazole-d5 is intended for use as an internal standard for the quantification of ornidazole by GC- or LC-MS. Ornidazole is an orally bioavailable 5-nitroimidazole derivative with antibacterial and antiprotozoal activities.^{1,2} Ornidazole inhibits the growth of clinical isolates of *B. fragilis* (MICs = 0.5-5 µM) and various anaerobic bacteria when used at concentrations ranging from less than 0.1 to 3.2 µg/ml.^{2,3} It also inhibits the growth of *Giardia* isolates (IC₅₀s = 0.01-0.47 µg/ml).⁴ Oral administration of ornidazole reduces *T. vaginalis* and *T. foetus* infection in mice and *E. histolytica* infection in rats with curative dose (CD₅₀) values of 37, 3, and 10 mg/kg, respectively.¹ Ornidazole (400 mg/kg per day) induces infertility in male rats within 7 days and inhibits spermatozoa binding to rat oocyte zona pellucida.^{5,6}

1. Hoffer, M., and Grunberg, E. Synthesis and antiprotozoal activity of 1-(3-chloro-2-hydroxypropyl)-

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

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substituted nitroimidazoles J. Med. Chem. 17(9)1019-1020(1974) 2. Jokipii, L., and Jokipii, A.M. Comparative evaluation of the 2-methyl-5-nitroimidazole compounds dimetridazole, metronidazole, secnidazole, ornidazole, tinidazole, carnidazole, and panidazole against Bacteroides fragilis and other bacteria of the Bacteroides fragilis group Antimicrob. Agents Chemother. 28(4)561-564(1985) 3. Wüst, J. Susceptibility of anaerobic bacteria to metronidazole, ornidazole, and tinidazole and routine susceptibility testing by standardized methods Antimicrob. Agents Chemother. 11(4)631-637(1977) 4. Majewska, A.C., Kasprzak, W., De Jonckheere, J.F., et al. Heterogeneity in the sensitivity of stocks and clones of Giardia to metronidazole and ornidazole Trans. R. Soc. Trop. Med. Hyg. 85(1)67-69(1991) 5. Oberländer, G., Yeung, C.H., and Cooper, T.G. Induction of reversible infertility in male rats by oral ornidazole and its effects on sperm motility and epididymal secretions J. Reprod. Fertil. 100(2)551-559(1994) 6. Bone, W., Jones, N.G., Kamp, G., et al. Effect of ornidazole on fertility of male rats: Inhibition of a glycolysis-related motility pattern and zona binding required for fertilization in vitro J. Reprod. Fertil. 118(1)127-135(2000)

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