

Product Data Sheet

Product Name: Tebuconazole-d9

Cat. No.: GC49055

Chemical Properties

Cas. No. 1246818-83-6

SMILES C1C(C=C1)=CC=C1CCC(C(C([2H])([2H])[2H])(C([2H])([2H])[2H])C([2H])([2H])[2H])(O)C
N2C=NC=N2

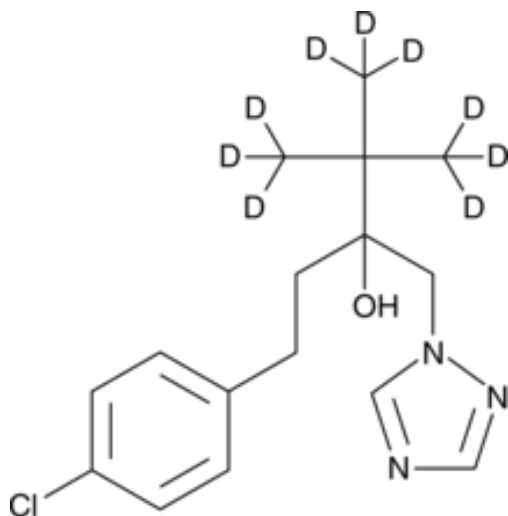
Formula C₁₆H₁₃ClD₉N₃O M.Wt 316.9

Solubility Acetonitrile: soluble, DMSO: Storage -20°C
soluble, Methanol: soluble

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

Tebuconazole-d₉ is intended for use as an internal standard for the quantification of tebuconazole by GC- or LC-MS. Tebuconazole is a triazole fungicide that is active against both seed and foliar fungi.¹ It inhibits 14α-demethylase isolated from *U. maydis* and *S. bicolor* with IC₅₀ values of 0.05 and 0.16

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

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

Product Data Sheet

nM, respectively.² It inhibits the androgenic effect of the androgen receptor agonist DHT ($IC_{20} = 2.89 \mu M$) and is cytotoxic ($EC_{20} = 38.9 \mu M$) in an MDA-kb2 assay.³ Tebuconazole (50 and 100 mg/kg per day) administered during gestation reduces testosterone levels and increases testicular levels of progesterone and 17α -hydroxyprogesterone in male rat fetuses.⁴ It has a feminizing effect on male pups and a virilizing effect on female pups. When administered to rats gestationally through postnatal day 42, tebuconazole (20 and 60 mg/kg per day) leads to cell death of pyramidal cells in the CA3-4 region of the hippocampus and layer V of the cortex concomitant with impairment in learning the platform location in the Morris water maze.⁵

1.Reinecke, P., Kaspers, H., Scheinpflug, H., et al.BAY HWG 1608, a new fungicide for foliar spray and seed-treatment use against a wide spectrum of fungal pathogensBr. Crop Prot. Conf.--Pests Dis., Proc. 141-46(1986) 2.Zarn, J.A., BrÜschweiler, B.J., and Schlatter, J.R.Azole fungicides affect mammalian steroidogenesis by inhibiting sterol 14α -demethylase and aromataseEnviron. Health Perspect.111(3)255-261(2003) 3.Orton, F., Rosivatz, E., Scholze, M., et al.Widely used pesticides with previously unknown endocrine activity revealed as in vitro antiandrogensEnviron. Health Perspect.119(6)794-800(2011) 4.Taxvig, C., Hass, U., Axelstad, M., et al.Endocrine-disrupting activities in vivo of the fungicides tebuconazole and epoxiconazoleToxicol. Sci.100(2)464-473(2007) 5.Moser, V.C., Barone, S., Jr., Smialowicz, R.J., et al.The effects of perinatal tebuconazole exposure on adult neurological, immunological, and reproductive function in ratsToxicol. Sci.62(2)339-352(2001)

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

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