

Product Data Sheet

Product Name: Cabergoline-d6

Cat. No.: GC47016

Chemical Properties

Cas. No. 2738376-76-4

SMILES O=C(NCC)N(CCCN(C([2H])([2H])[2H])C([2H])([2H])[2H])C([C@H]1CN(CC=C)[C@@]2([H])[C@](C3=C4C(C2)=CNC4=CC=C3)([H])C1)=O

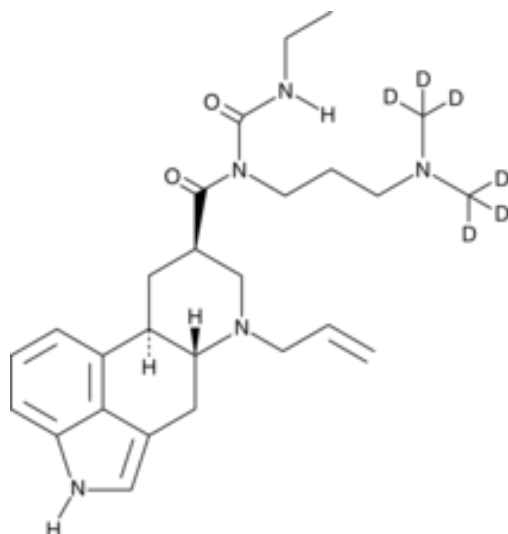
Formula C₂₆H₃₁D₆N₅O₂ M.Wt 457.6

Solubility Acetonitrile: Soluble, DMSO: Soluble Storage Store at -20°C

General For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the tips ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Evaluation sample solution: ship with blue ice All other available size: ship with RT, or Condition blue ice upon request.

Structure



Background

Cabergoline-d₆ is intended for use as an internal standard for the quantification of cabergoline by GC- or LC-MS. Cabergoline is a dopamine D₂ receptor agonist ($K_i = 0.912$ nM in rat striatal homogenates).¹ It is selective for dopamine D₂ over D₁ receptors ($K_i = 6,935$ nM). Cabergoline inhibits prolactin secretion in, and growth of, isolated rat pituitary tumor cells in a concentration-

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

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dependent manner, an effect that can be blocked by the dopamine D₂ receptor antagonist haloperidol.² Cabergoline reduces phosphorylation of mammalian target of rapamycin (mTOR) and induces the formation of LC3 puncta, a marker of autophagy, and apoptosis in MMQ rat pituitary cells.³ *In vivo*, cabergoline (0.25 mg/kg) stimulates motor activity and decreases dyskinesias in a cynomolgus monkey model of Parkinson's disease induced by MPTP.⁴ Formulations containing cabergoline have been used in the treatment of prolactinomas.

1.Miyagi, M., Itoh, F., Taya, F., et al.Dopamine receptor affinities in vitro and stereotypic activities in vivo of cabergoline in ratsBiol. Pharm. Bull.19(9)1210-1213(1996) 2.Eguchi, K., Kawamoto, K., Uozumi, T., et al.Effect of cabergoline, a dopamine agonist, on estrogen-induced rat pituitary tumors: In vitro culture studiesEndocr. J.42(3)413-420(1995) 3.Lin, S.J., Leng, Z.G., Guo, Y.H., et al.Suppression of mTOR pathway and induction of autophagy-dependent cell death by cabergolineOncotarget6(36)39329-39341(2015) 4.Grondin, R., Goulet, M.T., Di Paolo, T., et al.Cabergoline, a long-acting dopamine D₂-like receptor agonist, produces a sustained antiparkinsonian effect with transient dyskinesias in parkinsonian drug-naive primatesBrain Res.735(2)298-306(1996)

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