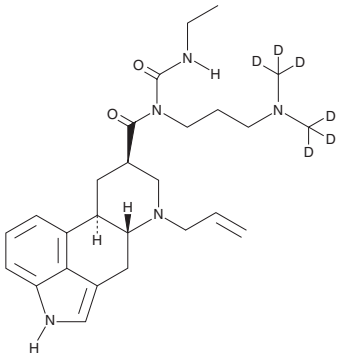
PRODUCT INFORMATION

Cabergoline-d_6

Item No. 31690

CAS Registry No.:	2738376-76-4
Formal Name:	N-[3-((dimethyl-d_3)amino)propyl]-N-[(ethylamino)carbonyl]-6-(2-propen-1-yl)-ergoline-8β-carboxamide
MF:	$C_{26}H_{31}D_6N_5O_2$
FW:	457.6
Chemical Purity:	≥98% (Cabergoline)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_6); ≤1% d_0
Supplied as:	A solution in acetonitrile
Storage:	-20°C
Stability:	≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Cabergoline-d_6 is intended for use as an internal standard for the quantification of cabergoline (Item No. 23934) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Cabergoline-d_6 is supplied as a solution in acetonitrile. To change the solvent, simply evaporate the acetonitrile under a gentle stream of nitrogen and immediately add the solvent of choice. Cabergoline-d_6 is soluble in the organic solvent DMSO.

Description

Cabergoline is a dopamine D_2 receptor agonist (K_i = 0.912 nM in rat striatal homogenates).[1] It is selective for dopamine D_2 over D_1 receptors (K_i = 6,935 nM). Cabergoline inhibits prolactin secretion in, and growth of, isolated rat pituitary tumor cells in a concentration-dependent manner, an effect that can be blocked by the dopamine D_2 receptor antagonist haloperidol (Item No. 12014).[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.

References

1. Miyagi, M., Itoh, F., Taya, F., *et al.* Dopamine receptor affinities *in vitro* and stereotypic activities *in vivo* of cabergoline in rats. *Biol. 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 studies. *Endocr. 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 cabergoline. *Oncotarget* **6(36)**, 39329-39341 (2015).
4. Grondin, R., Goulet, M.T., Di Paolo, T., *et al.* Cabergoline, a long-acting dopamine D_2-like receptor agonist, produces a sustained antiparkinsonian effect with transient dyskinesias in parkinsonian drug-naive primates. *Brain Res.* **735(2)**, 298-306 (1996).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM