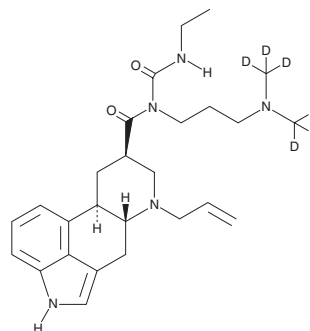


# PRODUCT INFORMATION



## Cabergoline-d<sub>6</sub> Item No. 31690

**CAS Registry No.:** 2738376-76-4  
**Formal Name:** N-[3-((dimethyl-d<sub>3</sub>)amino)propyl]-N-[(ethylamino)carbonyl]-6-(2-propen-1-yl)-ergoline-8β-carboxamide  
**MF:** C<sub>26</sub>H<sub>31</sub>D<sub>6</sub>N<sub>5</sub>O<sub>2</sub>  
**FW:** 457.6  
**Chemical Purity:** ≥98% (Cabergoline)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>6</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A solution in acetonitrile  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

Cabergoline-d<sub>6</sub> 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<sub>6</sub> 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<sub>6</sub> is soluble in the organic solvent DMSO.

### Description

Cabergoline is a dopamine D<sub>2</sub> receptor agonist (K<sub>i</sub> = 0.912 nM in rat striatal homogenates).<sup>1</sup> It is selective for dopamine D<sub>2</sub> over D<sub>1</sub> receptors (K<sub>i</sub> = 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<sub>2</sub> receptor antagonist haloperidol (Item No. 12014).<sup>2</sup> 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.<sup>3</sup> *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.<sup>4</sup> 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<sub>2</sub>-like receptor agonist, produces a sustained antiparkinsonian effect with transient dyskinesias in parkinsonian drug-naive primates. *Brain Res.* **735(2)**, 298-306 (1996).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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