

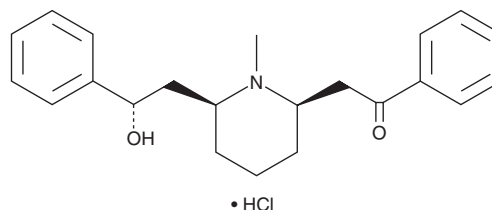
# PRODUCT INFORMATION



## (-)-Lobelin (hydrochloride)

Item No. 29526

**CAS Registry No.:** 134-63-4  
**Formal Name:** 2-[(2R,6S)-6-[(2S)-2-hydroxy-2-phenylethyl]-1-methyl-2-piperidiny]-1-phenyl-ethanone, monohydrochloride  
**Synonyms:** (-)- $\alpha$ -Lobeline, VUF 10751  
**MF:** C<sub>22</sub>H<sub>27</sub>NO<sub>2</sub> • HCl  
**FW:** 373.9  
**Purity:** ≥95%  
**UV/Vis.:**  $\lambda_{\text{max}}$ : 245 nm  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥2 years  
**Item Origin:** Synthetic



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

### Laboratory Procedures

(-)-Lobelin (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the (-)-lobelin (hydrochloride) in the solvent of choice, which should be purged with an inert gas. (-)-Lobelin (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of (-)-lobelin (hydrochloride) in ethanol is approximately 2 mg/ml and approximately 10 mg/ml in DMSO and DMF.

(-)-Lobelin (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (-)-lobelin (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. (-)-Lobelin (hydrochloride) has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

(-)-Lobeline is an alkaloid that has been found in *Lobelia* and has diverse biological activities.<sup>1-3</sup> It binds to nicotinic acetylcholine receptors (nAChRs) in rat brain homogenates ( $K_i = 4$  nM) and has antinociceptive effects in the tail-flick assay in mice.<sup>1</sup> (-)-Lobeline (0.3 and 0.9 mg/kg) reduces the number of errors in a repeated acquisition procedure in the radial arm maze in rats.<sup>2</sup> It also decreases immobility time in the forced swim test and feeding latency in the novelty suppressed feeding test, indicating antidepressant-like activity, in mice when administered at doses of 1 and 4 mg/kg.<sup>3</sup>

### References

1. Flammia, D., Dukat, M., Damaj, M.I., *et al.* Lobeline: Structure-affinity investigation of nicotinic acetylcholinergic receptor binding. *J. Med. Chem.* **42**(18), 3726-3731 (1999).
2. Levin, E.D. and Christopher, C.N. Lobeline-induced learning improvement of rats in the radial-arm maze. *Pharmacol. Biochem. Behav.* **76**(1), 133-139 (2003).
3. Roni, M.A. and Rahman, S. Antidepressant-like effects of lobeline in mice: Behavioral, neurochemical, and neuroendocrine evidence. *Prog. Neuropsychopharmacol. Biol. Psychiatry* **41**, 44-51 (2013).

#### 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.

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