

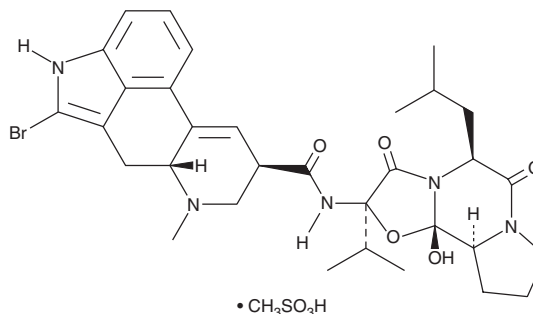
# PRODUCT INFORMATION



## Bromocriptine (mesylate)

Item No. 14598

**CAS Registry No.:** 22260-51-1  
**Formal Name:** (5 $\alpha$ )-2-bromo-12'-hydroxy-2'-(1-methylethyl)-5'-(2-methylpropyl)-ergotaman-3',6',18-trione, monomethanesulfonate  
**Synonym:** CB-154  
**MF:** C<sub>32</sub>H<sub>40</sub>BrN<sub>5</sub>O<sub>5</sub> • CH<sub>3</sub>SO<sub>3</sub>H  
**FW:** 750.7  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 304 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

Bromocriptine (mesylate) is supplied as a crystalline solid. A stock solution may be made by dissolving the bromocriptine (mesylate) in the solvent of choice. Bromocriptine (mesylate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of bromocriptine (mesylate) in ethanol is approximately 5 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Bromocriptine (mesylate) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, bromocriptine (mesylate) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Bromocriptine (mesylate) has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Bromocriptine is a dopamine receptor agonist ( $K_{iS}$  = 1,659, 12.2, 12.2, 59.7, and 1,691 nM for dopamine D<sub>1</sub>, D<sub>2</sub>, D<sub>3</sub>, D<sub>4</sub>, and D<sub>5</sub> receptors, respectively).<sup>1</sup> It also binds to the serotonin (5-HT) receptor subtypes 5-HT<sub>1A</sub> and 5-HT<sub>1D</sub> ( $K_{iS}$  = 12.9 and 10.7 nM, respectively), as well as  $\alpha_1$ -adrenergic receptors ( $K_{iS}$  = 1.12-4.17 nM).<sup>1,2</sup> Bromocriptine (5 mg/kg) restores locomotor activity, without inducing dyskinesia, in a macaque model of Parkinson's disease induced by MPTP.<sup>3</sup> Formulations containing bromocriptine have been used in the treatment of Parkinson's disease, hyperprolactinemia-associated dysfunctions, and acromegaly.

### References

1. Kvernmo, T., Härtter, S., and Bürger, E. A review of the receptor-binding and pharmacokinetic properties of dopamine agonists. *Clin. Ther.* **28(8)**, 1065-1078 (2006).
2. Millan, M.J., Maiorini, L., Cussac, D., et al. Differential actions of antiparkinson agents at multiple classes of monoaminergic receptor. I. A multivariate analysis of the binding profiles of 14 drugs at 21 native and cloned human receptor subtypes. *J. Pharmacol. Exp. Ther.* **303(2)**, 791-804 (2002).
3. Rouillard, C., Bédard, P.J., and De Paolo, T. Effects of chronic treatment of MPTP monkeys with bromocriptine alone or in combination with SKF 38393. *Eur. J. Pharmacol.* **185(2-3)**, 209-215 (1990).

#### 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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