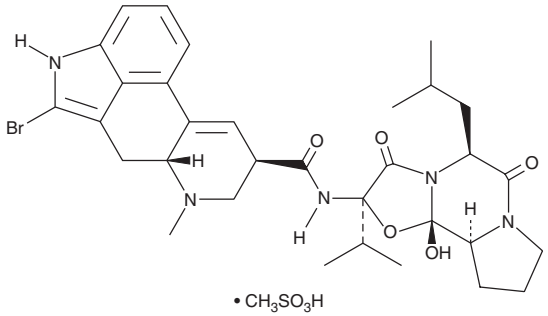
PRODUCT INFORMATION

Bromocriptine (mesylate)

Item No. 14598

CAS Registry No.: 22260-51-1
Formal Name: (5α)-2-bromo-12'-hydroxy-2'-(1-methylethyl)-5'-(2-methylpropyl)-errgotaman-3',6',18-trione, monomethanesulfonate
Synonym: CB-154
MF: $C_{32}H_{40}BrN_5O_5 \bullet CH_3SO_3H$
FW: 750.7
Purity: ≥98%
UV/Vis.: λ_{max}: 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_1, D_2, D_3, D_4, and D_5 receptors, respectively).[1] It also binds to the serotonin (5-HT) receptor subtypes 5-HT_{1A} and 5-HT_{1D} (K_is = 12.9 and 10.7 nM, respectively), as well as α_1-adrenergic receptors (K_is = 1.12-4.17 nM).[1,2] Bromocriptine (5 mg/kg) restores locomotor activity, without inducing dyskinesia, in a macaque model of Parkinson's disease induced by MPTP.[3] 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., Maiofiss, 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).

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