

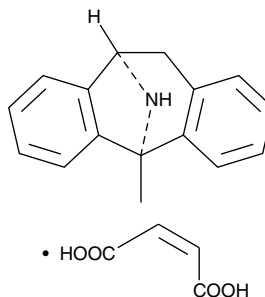
Product Information



(+)-MK 801 (hydrogen maleate)

Item No. 10009019

CAS Registry No.: 77086-22-7
Formal Name: 10,11-dihydro-5S-methyl-5H-dibenzo[a,d]cyclohepten-5,10-imine, (2Z)-2-butenedioate
Synonym: Dizocilpine
MF: $C_{16}H_{15}N \cdot C_4H_4O_4$
FW: 337.4
Purity: $\geq 99\%$
Stability: ≥ 6 months at 4°C
Supplied as: A white to off-white solid



Laboratory Procedures

For long term storage, we suggest that (+)-MK 801 (hydrogen maleate) be stored as supplied at 4°C. It should be stable for at least six months.

(+)-MK 801 (hydrogen maleate) is supplied as a white to off-white solid. A stock solution may be made by dissolving the (+)-MK 801 (hydrogen maleate) in the solvent of choice. (+)-MK 801 (hydrogen maleate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of (+)-MK 801 (hydrogen maleate) in these solvents is approximately 0.5, 20, and 25 mg/ml, respectively.

(+)-MK 801 (hydrogen maleate) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (+)-MK 801 (hydrogen maleate) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. (+)-MK 801 (hydrogen maleate) has a solubility of approximately 0.5 mg/ml in a 1:9 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

MK-801 is a potent, selective and non-competitive N-methyl-D-aspartate (NMDA) (Item No. 14581) receptor antagonist ($K_i = 30.5$ nM) that acts at the NMDA receptor-operated ion channel as an open channel blocker, preventing Ca^{2+} flux.¹ It has been shown to be protective in various models of ischemia as well as to inhibit behavioral sensitization to certain psychostimulants.^{2,3}

References

1. Wong, E.H.K., Kemp, J.A., Priestley, T., *et al.* The anticonvulsant MK-801 is a potent N-methyl-D-aspartate antagonist. *Proc. Natl. Acad. Sci. USA* **83**, 7104-7108 (1986).
2. Hatfield, R.H., Gill, R., and Brazell, C. The dose-response relationship and therapeutic window for dizocilpine (MK-801) in a rat focal ischaemia model. *Eur. J. Pharmacol.* **216**, 1-7 (1992).
3. Scheggi, S., Mangiavacchi, S., Masi, F., *et al.* Dizocilpine infusion has a different effect in the development of morphine and cocaine sensitization: Behavioral and neurochemical aspects. *Neuroscience* **109**(2), 267-274 (2002).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10009019

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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