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 • C_{4}H_{4}O_{4}
FW: 337.4
Purity: ≥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.

Description

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+} influx. It has been shown to be protective in various models of ischemia as well as to inhibit behavioral sensitization to certain psychostimulants.

References