Product Information

(S)-(+) MT-45 (hydrochloride)
Item No. 15128

CAS Registry No.: 52694-54-9
Formal Name: (S)-1-cyclohexyl-4-(1,2-diphenylethyl)piperazine, dihydrochloride
MF: C_{24}H_{32}N_{2} • 2HCl
FW: 421.5
Purity: ≥98%
Chiral Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid

Laboratory Procedures
For long term storage, we suggest that (S)-(+) MT-45 (hydrochloride) be stored as supplied at -20°C. It should be stable for at least two years.

(S)-(+) MT-45 (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the (S)-(+) MT-45 (hydrochloride) in the solvent of choice. (S)-(+) MT-45 (hydrochloride) is soluble in chloroform at a concentration of approximately 1 mg/ml.

(S)-(+) MT-45 (hydrochloride) is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

MT-45 (Item No. 14082) is a piperazine derivative with potent analgesic activity comparable to morphine despite being structurally unrelated to most other opioids. 1 (S)-(+) MT-45 is an enantiomer of MT-45 that displays analgesic potency similar to that of morphine (ED_{50} = 0.35 and 0.4 μg/kg, i.v., respectively, in Haffner’s mouse tail-pinch method). 2 This contrasts with the relatively weak activity of (R)-(−)-MT-45 (Item No. 15127; ED_{50} = 2 μg/kg, i.v.). 2 MT-45 has been used as a lead compound to develop a large group of potent opioid drugs with agonist or antagonist activities particular to the various opioid receptor subtypes. 3 This product is intended for forensic and research applications.

References

Related Products
For a list of related products please visit: www.caymanchem.com/catalog/15128