

Product Name: MPEP hydrochloride

Catalog No.: 1212

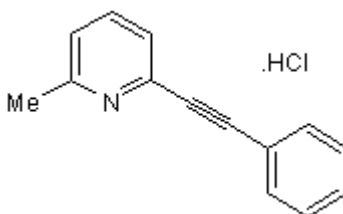
Batch No.: 10

CAS Number: 219911-35-0

IUPAC Name: 2-Methyl-6-(phenylethynyl)pyridine hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₄H₁₁N.HCl
Batch Molecular Weight: 229.71
Physical Appearance: White solid
Solubility: water to 5 mM with gentle warming
 ethanol to 100 mM
 DMSO to 100 mM
Storage: Desiccate at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.4 (Ether:Hexane [1:2])
Melting Point: Between 149 - 151°C
HPLC: Shows 99.9% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	73.2	5.27	6.1
Found	73.14	5.28	6.02

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Potent and highly selective non-competitive antagonist at the mGlu₅ receptor subtype (IC₅₀ = 36 nM) and a positive allosteric modulator at mGlu₄ receptors. Centrally active following systemic administration in vivo. Reverses mechanical hyperalgesia in the inflamed rat hind paw. Also available as part of the Group I mGlu Receptor Tocriset™.

Physical and Chemical Properties:

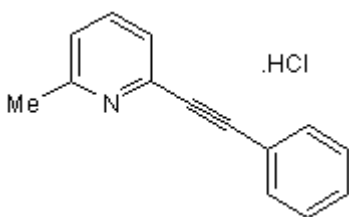
Batch Molecular Formula: C₁₄H₁₁N.HCl

Batch Molecular Weight: 229.71

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Desiccate at +4°C

Solubility & Usage Info:

water to 5 mM with gentle warming
ethanol to 100 mM
DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Gasparini et al (1999) 2-Methyl-6-(phenylethynyl)-pyridine (MPEP), a potent, selective and systemically active mGlu₅ receptor antagonist. *Neuropharmacology* **38** 1493. PMID: 10530811.

Salt et al (1999) Antagonism of the mGlu₅ agonist 2-chloro-5-hydroxyphenylglycine by the novel selective mGlu₅ antagonist 6-methyl-2-(phenylethynyl)-pyridine (MPEP) in the thalamus. *Br.J.Pharmacol.* **127** 1057. PMID: 10455248.

Bowes et al (1999) Anti-hyperalgesic effects of the novel metabotropic glutamate receptor 5 antagonist, methylphenylethynylpyridine, in rat models of inflammatory pain. *Br.J.Pharmacol.* **126** 250P.

Mathiesen et al (2003) Positive allosteric modulation of the human metabotropic glutamate receptor 4 (hmGluR4) by SIB-1893 and MPEP. *Br.J.Pharmacol.* **138** 1026. PMID: 12684257.

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