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DATASHEET

MPEP hydrochloride

Product overview

Name	MPEP hydrochloride
Cat No	HB0426
Biological action	Antagonist
Purity	>98%
Description	Potent, selective mGluR ₅ antagonist / mGluR ₄ positive allosteric modulator

Images



Biological Data

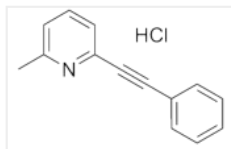
Biological description	MPEP hydrochloride is a potent, selective and non-competitive mGlu₅ receptor antagonist (IC₅₀ = 36 nM) and also a mGlu₄ receptor positive allosteric modulator (PAM). MPEP prevents induction of various types of long term potentiation (LTP) and long term depression (LTD). MPEP also suppresses addiction-like behaviour for cocaine, ethanol and nicotine in various models of addiction. MPEP is blood-brain barrier (BBB) permeable and is active <i>in vivo</i>. Water soluble MTEP hydrochloride is also available.
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Solubility & Handling

Storage instructions	+4 °C (desiccate)
Solubility overview	Soluble in DMSO (100mM) and in ethanol (100 mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	2-Methyl-6-(phenylethynyl)pyridine hydrochloride
Molecular Weight	229.71

Chemical structure**Molecular Formula**C₁₄H₁₁N.HCl**CAS Number**

219911-35-0

PubChem identifier

9794588

SMILESCC1=CC=CC(=N1)C#CC2=CC=CC=C2.Cl**Source**

Synthetic

InChi

InChI=1S/C14H11N.ClH/c1-12-6-5-9-14(15-12)11-10-13-7-3-2-4-8-13;/h2-9H,1H3;1H

InChiKey

PKDHDJBNEKXCBI-UHFFFAOYSA-N

MDL number

MFCD02262119

Appearance

White solid

References

2-Methyl-6-(phenylethynyl)-pyridine (MPEP), a potent, selective and systemically active mGlu5 receptor antagonist.

Gasparini F *et al* (1999) *Neuropharmacology* 38(10)

PubMedID

[10530811](#)

Separate Ionotropic and Metabotropic Glutamate Receptor Functions in Depotential vs. LTP: A Distinct Role for Group1 mGluR Subtypes and NMDARs.

Latif-Hernandez et al (2016) *Front Cell Neurosci.* 7;

PubMedID

[27872582](#)

NMDA receptors, mGluR5, and endocannabinoids are involved in a cascade leading to hippocampal long-term depression.

Izumi and Zorumski (2012) *Neuropsychopharmacology* 37(3)

PubMedID

[21993209](#)

Negative Allosteric Modulators of Metabotropic Glutamate Receptors Subtype 5 in Addiction: a Therapeutic Window.

Mihov and Hasler (2016) *Int J Neuropsychopharmacol.* 5;

PubMedID

[26802568](#)
