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## DATASHEET

MPEP hydrochloride

### Product overview

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

### Images



### Biological Data

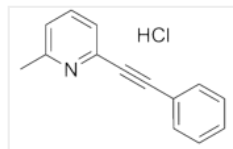
|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Biological description</b> | <p>MPEP hydrochloride is a potent, selective and non-competitive mGlu<sub>5</sub> receptor antagonist (IC<sub>50</sub> = 36 nM) and also a mGlu<sub>4</sub> receptor positive allosteric modulator (PAM).</p> <p>MPEP prevents induction of various types of long term potentiation (LTP) and long term depression (LTD).</p> <p>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>.</p> <p>Water soluble <b>MTEP hydrochloride</b> is also available.</p> |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Solubility & Handling

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

### Chemical Data

|                         |                                                  |
|-------------------------|--------------------------------------------------|
| <b>Chemical name</b>    | 2-Methyl-6-(phenylethynyl)pyridine hydrochloride |
| <b>Molecular Weight</b> | 229.71                                           |

**Chemical structure**

**Molecular Formula**  
**CAS Number**  
**PubChem identifier**  
**SMILES**  
**Source**  
**InChi**  
**InChiKey**  
**MDL number**  
**Appearance**

C<sub>14</sub>H<sub>11</sub>N.HCl  
219911-35-0  
9794588  
CC1=CC=CC(=N1)C#CC2=CC=CC=C2.Cl  
Synthetic  
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  
PKDHDJBNEKXCBI-UHFFFAOYSA-N  
MFCD02262119  
White solid

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## 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](#)

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