

# MPEP (Hydrochloride)

Catalog No: tcsc0793



## Available Sizes

**Size:** 10mg

**Size:** 50mg



## Specifications

**CAS No:**

219911-35-0

**Formula:**

$C_{14}H_{12}ClN$

**Pathway:**

GPCR/G Protein

**Target:**

mGluR

**Purity / Grade:**

>98%

**Solubility:**

H<sub>2</sub>O : ≥ 50 mg/mL (217.68 mM)

**Observed Molecular Weight:**

229.7

## Product Description

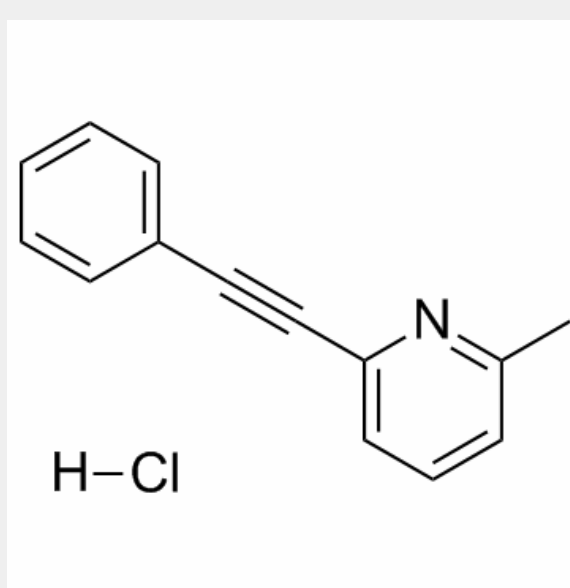
MPEP hydrochloride is a potent and highly selective non-competitive antagonist at the mGlu5 receptor subtype with IC<sub>50</sub> of 36 nM.

IC<sub>50</sub> Value: 36 nM

Target: mGluR

in vitro: MPEP has no appreciable agonist or antagonist activity at the closely related recombinant human mGlu1b receptor expressed in CHO-K1 cells or a purinoreceptor endogenously expressed in L(tk-) cells up to concentrations of 100  $\mu$ M. Furthermore, MPEP shows no appreciable agonist or antagonist activity in cAMP accumulation or [35S]-GTP $\gamma$ S binding assays at the recombinant human group II and III metabotropic receptors (human mGlu2, -3, -4a, -6, -7b, -8a) as well as the human NMDA (NMDAR1A/2A, -1A/2B), rat AMPA (GluR3) and human kainate (GluR6) receptor subtypes. In slices of rat neonatal hippocampus, striatum, and cortex but not cerebellum, MPEP inhibits DHPG-stimulated PI hydrolysis with IC<sub>50</sub> of 8.0 nM, 20.5 nM, and 17.9 nM, respectively. MPEP positively modulates the hmGluR4 in a recombinant expression system, and the effect of MPEP is fully dependent on the activation of the orthosteric agonist L-AP4.

in vivo: MPEP (1-30 mg/kg) induces anxiolytic-like effects in the conflict drinking test and the elevated plus-maze test in rats as well as in the four-plate test in mice. MPEP (1-20 mg/kg) shortens the immobility time in a tail suspension test in mice, but it is inactive in the behavioural despair test in rats. MPEP has no effect on locomotor activity or motor coordination. MPEP significantly reduces fmr1 but not wild-type center square entries and duration. In open field tests, MPEP reduces fmr1tm1Cgr center field behavior to one indistinguishable from wild-type. MPEP produces a significant reduction of total locomotor activity in three of four groups tested, at both 10 mg/kg and 30 mg/kg.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!