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# **DATASHEET**

MTEP hydrochloride

#### **Product overview**

Name MTEP hydrochloride

Cat No HB0431
Biological action Antagonist
Purity >98%

**Description** Potent, highly selective, non-competitive mGluR<sub>5</sub> antagonist

## **Images**



### **Biological Data**

**Biological description** 

MTEP hydrochloride is a potent, highly selective and non-competitive mGlu<sub>5</sub> receptor antagonist (IC<sub>50</sub> = 5 nM and  $K_i$  = 16 nM in an *in vitro* Ca<sup>2+</sup>-flux assay).

MTEP has no significant effect on other mGluRs and shows fewer off-target effects than MPEP hydrochloride. MTEP shows ~10-fold greater selectivity for mGlu<sub>5</sub> than MPEP.

MTEP also blocks induction of tLTP (timing-dependent long term potentiation) and has antidepressant, anxiolytic and neuroprotective properties.

MTEP is active in vivo.

## Solubility & Handling

Solubility overview Storage instructions Storage of solutions

**Shipping Conditions** 

**Important** 

Soluble in water (100mM) and in DMSO (100mM)

+4°C (desiccate)

Prepare and use solutions on the same day if possible. Store solutions at -20 °C for up to one month if storage is required. Equilibrate to RT and ensure the solution is precipitate free before use.

Stable for ambient temperature shipping. Follow storage instructions on receipt.

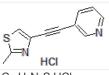
This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

**Chemical Data** 

**Chemical name** 3-((2-Methyl-1,3-thiazol-4-yl)ethynyl)pyridine hydrochloride

Molecular Weight 236.72

**Chemical structure** 



Molecular Formula C<sub>11</sub>H<sub>8</sub>N<sub>2</sub>S.HCl **CAS Number** 1186195-60-7 **PubChem identifier** 45073467

**SMILES** CC1=NC(=CS1)C#CC2=CN=CC=C2.CI

Source Synthetic

InChi InChl=1S/C11H8N2S.CIH/c1-9-13-11(8-14-9)5-4-10-3-2-6-12-7-10;/h2-3,6-8H,1H3;1H

InChiKey YCIOJDKGCWAHLR-UHFFFAOYSA-N

**MDL** number MFCD08458895 **Appearance** Light cream solid

#### References

Neuroprotective potential of mGluR5 antagonist MTEP: effects on kainate-induced excitotoxicity in the rat hippocampus.

Domin H et al (2010) Pharmacol Rep 62(6) **PubMedID** 21273662

NMDA but not AMPA glutamatergic receptors are involved in the antidepressant-like activity of MTEP during the forced swim test in mice.

Pomierny-Chamioło L et al (2010) Pharmacol Rep 62(6)

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Metabotropic glutamate receptor 5 negative allosteric modulators as novel tools for in vivo investigation.

Keck TM et al (2012) ACS Med Chem Lett 3(7) **PubMedID** 22924094

Metabotropic glutamate receptor subtype 5 antagonists MPEP and MTEP.

Lea and Faden (2006) CNS Drug Rev. 12(2) **PubMedID** 16958988

Gating of NMDA receptor-mediated hippocampal spike timing-dependent potentiation by mGluR5.

Kwag and Paulsen (2012) Neuropharmacology 63(4)

**PubMedID** 22652057