

Hello Bio, Inc.  
304 Wall St., Princeton, NJ 08540 USA

T. 609-683-7500  
F. 609-228-4994

customercare-usa@hellobio.com



## DATASHEET

MTEP hydrochloride

### Product overview

|                          |                                                                         |
|--------------------------|-------------------------------------------------------------------------|
| <b>Name</b>              | MTEP hydrochloride                                                      |
| <b>Cat No</b>            | HB0431                                                                  |
| <b>Biological action</b> | Antagonist                                                              |
| <b>Purity</b>            | >98%                                                                    |
| <b>Description</b>       | Potent, highly selective, non-competitive mGluR <sub>5</sub> antagonist |

### Images



### Biological Data

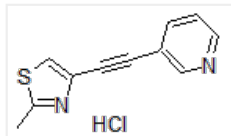
|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Biological description</b> | <p>MTEP hydrochloride is a potent, highly selective and non-competitive mGlu<sub>5</sub> receptor antagonist (IC<sub>50</sub> = 5 nM and K<sub>i</sub> = 16 nM in an <i>in vitro</i> Ca<sup>2+</sup>-flux assay).</p> <p>MTEP has no significant effect on other mGluRs and shows fewer off-target effects than <b>MPEP hydrochloride</b>. MTEP shows ~10-fold greater selectivity for mGlu<sub>5</sub> than MPEP.</p> <p>MTEP also blocks induction of tLTP (timing-dependent long term potentiation) and has antidepressant, anxiolytic and neuroprotective properties.</p> <p>MTEP is active <i>in vivo</i>.</p> |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Solubility & Handling

|                             |                                                                                                                               |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <b>Storage instructions</b> | +4 °C (desiccate)                                                                                                             |
| <b>Solubility overview</b>  | Soluble in water (100mM) and in DMSO (100mM)                                                                                  |
| <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>    | 3-((2-Methyl-1,3-thiazol-4-yl)ethynyl)pyridine hydrochloride |
| <b>Molecular Weight</b> | 236.72                                                       |

**Chemical structure**

|                           |                                                                                |
|---------------------------|--------------------------------------------------------------------------------|
| <b>Molecular Formula</b>  | C <sub>11</sub> H <sub>8</sub> N <sub>2</sub> S.HCl                            |
| <b>CAS Number</b>         | 1186195-60-7                                                                   |
| <b>PubChem identifier</b> | 45073467                                                                       |
| <b>SMILES</b>             | CC1=NC(=CS1)C#CC2=CN=CC=C2.Cl                                                  |
| <b>Source</b>             | Synthetic                                                                      |
| <b>InChi</b>              | InChI=1S/C11H8N2S.ClH/c1-9-13-11(8-14-9)5-4-10-3-2-6-12-7-10;/h2-3,6-8H,1H3;1H |
| <b>InChiKey</b>           | YCIOJDKGCWAHLR-UHFFFAOYSA-N                                                    |
| <b>MDL number</b>         | MFCD08458895                                                                   |
| <b>Appearance</b>         | Light cream solid                                                              |

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## 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-Chamiolo L *et al* (2010) Pharmacol Rep 62(6)

**PubMedID** [21273676](#)

### 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](#)

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