

## Product Data Sheet

Product Name: MTEP hydrochloride

Cat. No.: GC11871

### Chemical Properties

Cas. No. 1186195-60-7

Chemical Name 2-methyl-4-(2-pyridin-3-ylethynyl)-1,3-thiazole;hydrochloride

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

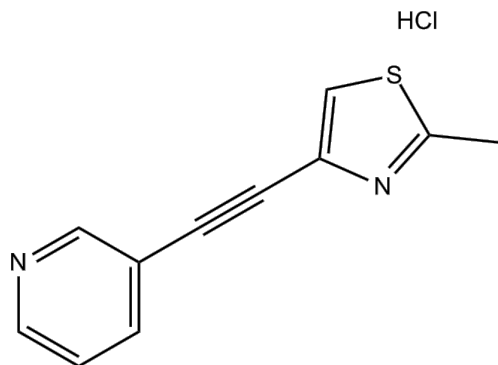
Formula  $C_{11}H_9ClN_2S$  M.Wt 236.72

Solubility DMF: 3 mg/ml, DMSO: 15 mg/ml, Ethanol: 2 mg/ml, PBS (pH 7.2): 10 mg/ml  
Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



### Background

IC50: 5 nM

MTEP is a selective metabotropic glutamate receptor subtype 5 (mGluR5) antagonist.

The mGluRs are classified into three groups: group I (mGluR1 and 5), group II (mGluR2 and 3) and group III (mGluR4, 6, 7 and 8). mGluR5 belonging to group I is excitatory, mainly localized at the

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edge of axo-spinous and axodendritic synaptic junctions.

In vitro: Like MPEP, MTEP showed a nanomolar affinity for mGluR5, but seemed to be superior to MPEP in term of specificity. MTEP did not influence mGluR2, mGluR7, NMDA, AMPA or kainate receptors, while inhibited MAOA at a concentration three times higher than MPEP. Moreover, recent study indicated that MTEP was five times stronger than MPEP as an anxiolytic compound [1].

In vivo: MTEP with doses between 0.5 and 3 mg/kg was found to decrease the haloperidol-induced muscle rigidity, which was measured as an increased muscle resistance of the rat hind leg. The longest and strongest effect was observed with the dose of 1 mg/kg. MTEP was also found to reduce the haloperidol-induced increase in electromyographic activity recorded in the tibialis anterior and gastrocnemius muscles. 3 and 5 mg/kg of MTEP could inhibit the haloperidol-induced catalepsy [1].

Clinical trial: N/A

Reference:

[1] Ossowska K, Konieczny J, Wolfarth S, Pilc A. MTEP, a new selective antagonist of the metabotropic glutamate receptor subtype 5 (mGluR5), produces antiparkinsonian-like effects in rats. *Neuropharmacology*. 2005 Sep;49(4):447-55.

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