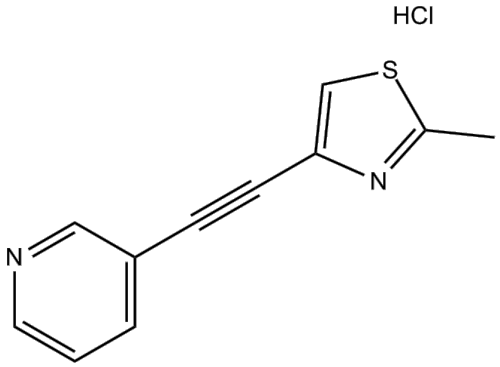
Product Data Sheet

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

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 that 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.