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Print Date: Jul 22nd 2016

Certificate of Analysis

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Product Name: **MTEP hydrochloride** **Catalog No.: 2921** **Batch No.: 5**

CAS Number: 1186195-60-7

IUPAC Name: 3-((2-Methyl-1,3-thiazol-4-yl)ethynyl)pyridine hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{11}H_8N_2S.HCl$

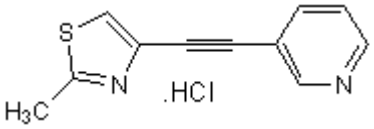
Batch Molecular Weight: 236.72

Physical Appearance: White solid

Solubility: water to 100 mM
DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.3 (Ethyl acetate:Petroleum ether [2:3])

HPLC: Shows >99.6% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	55.81	3.83	11.83
Found	55.87	3.84	11.77

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Description:

Potent, selective and non-competitive $mGlu_5$ antagonist (IC_{50} = 5 nM in Ca^{2+}-flux assay; K_i= 16 nM). Displays anxiolytic activity in vivo and is orally active.

Physical and Chemical Properties:

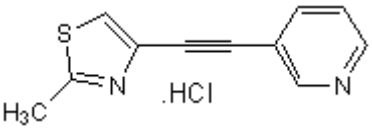
Batch Molecular Formula: $C_{11}H_8N_2S.HCl$

Batch Molecular Weight: 236.72

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

water to 100 mM
DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Bradbury *et al* (2005) Metabotropic glutamate receptor mGlu5 is a mediator of appetite and energy balance in rats and mice. J.Pharmacol.Exp.Ther. ***313*** 395. PMID: 15590770.

Klodzinska *et al* (2004) Anxiolytic-like effects of MTEP, a potent and selective mGlu5 receptor agonist does not involve $GABA_A$ signaling. Neuropharmacology ***47*** 342. PMID: 15275823.

Roppe *et al* (2004) 5-[(2-Methyl-1,3-thiazol-4-yl)ethynyl]-2,3'-bipyridine: a highly potent, orally active metabotropic glutamate subtype 5 (mGlu5) receptor antagonist with anxiolytic activity. Bioorg.Med.Chem.Lett. ***14*** 3993. PMID: 15225713.

Cosford *et al* (2003) 3-[(2-Methyl-1,3-thiazol-4-yl)ethynyl]- pyridine: A potent and highly selective metabotropic glutamate subtype 5 receptor antagonist with anxiolytic activity. J.Med.Chem. ***46*** 204. PMID: 12519057.

Brodkin *et al* (2002) Reduced stress-induced hyperthermia in mGluR5 knockout mice. Eur.J.Neurosci. ***16*** 2241. PMID: 12473093.