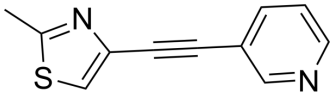
MTEP

Cat. No.:	HY-13206A
CAS No.:	329205-68-7
Molecular Formula:	$C_{11}H_8N_2S$
Molecular Weight:	200.26
Target:	mGluR
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

MTEP is a potent, non-competitive and highly selective mGluR5 antagonist, with an IC_{50} of 5 nM and a K_i of 16 nM. MTEP shows antidepressant and anxiolytic-like effects. MTEP can be used for Parkinson's disease research[1][2][3][4]. MTEP is a click chemistry reagent, it contains an Alkyne group and can undergo copper-catalyzed azide-alkyne cycloaddition (CuAAc) with molecules containing Azide groups.

IC_{50} & Target

mGluR5 5 nM (IC_{50})	mGluR5 16 nM (Ki)

In Vitro

MTEP shows highly selective for mGluR5 over mGluR1, has no effect on other mGluR subtypes, and has fewer off-target effects than MPEP (HY-14609A)[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

MTEP (0-5 mg/kg, i.p., once) inhibits the catalepsy induced by Haloperidol (HY-14538) (0.5 mg/kg/2 ml i.p.)[2].

MTEP (0.3-3 mg/kg, intraperitoneal injection, once) induces antidepressant-like effects in male C57BL/6J mice[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male Wistar rats (215-315 g, 5-9/group)[2]
Dosage:	1, 3 and 5 mg/kg
Administration:	IP, once, injected 60 min after Haloperidol (HY-14538) (0.5 mg/kg/2 ml i.p.)
Result:	Inhibited the catalepsy induced by Haloperidol (HY-14538).

Animal Model:	Male C57BL/6J mice (23-25 g)[3]
Dosage:	0.3, 1 and 3 mg/kg
Administration:	IP, 1 h before the test
Result:	Significantly decreased the immobility time of mice in the tail suspension test (TST) by 24%, 41% and 48%, respectively. The efficacy of MTEP used at doses of 1 and 3 mg/kg was not significantly different from that of Imipramine (HY-B1490A) (20 mg/kg, ip), used as a

	positive standard.

CUSTOMER VALIDATION

- Sci Adv. 2022 Aug 19;8(33):eabn7357.

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REFERENCES

[1]. Lea PM 4th, et al. Metabotropic glutamate receptor subtype 5 antagonists MPEP and MTEP. CNS Drug Rev. 2006 Summer;12(2):149-66.

[2]. Ossowska K, et al. 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.

[3]. Klodzinska A, et al. Anxiolytic-like effects of MTEP, a potent and selective mGlu5 receptor agonist does not involve GABA(A) signaling. Neuropharmacology. 2004 Sep;47(3):342-50.

[4]. Pałucha A, et al. Potential antidepressant-like effect of MTEP, a potent and highly selective mGluR5 antagonist. Pharmacol Biochem Behav. 2005 Aug;81(4):901-6.

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