
Product Data Sheet

Product Name: MMPIP
Cat. No.: GC64218

Chemical Properties

Cas. No. 479077-02-6

Formula C₁₉H₁₅N₃O₃ M.Wt 333.34

Solubility 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

MMPIP is a reversible allosteric antagonist of the metabotropic glutamate receptor 7 (mGluR7) that blocks agonist-induced calcium mobilization ($IC_{50} = 26 \text{ nM}$).^{1,2} It does not affect other mGlu receptors. The modulation of mGluR7 by MMPIP is context dependent, in that it is not observed in all known mGluR7 signaling pathways.² MMPIP has been used to investigate the role of mGluR7 in cocaine-mediated reward signaling, attention and impulse control, and cognitive behavior in mice and rats.^{3,4,5} MMPIP also reversibly inhibits constitutive activity of mGluR7 in sympathetic neurons from the rat superior cervical ganglion.⁶

1. Suzuki, G., Tsukamoto, N., Fushiki, H., et al. In vitro pharmacological characterization of novel isoxazolopyridone derivatives as allosteric metabotropic glutamate receptor 7 antagonists. *J. Pharmacol. Exp. Ther.* 323(1):147-156(2007)
2. Niswender, C.M., Johnson, K.A., Miller, N.R., et al. Context-dependent pharmacology exhibited by negative allosteric modulators of metabotropic glutamate receptor 7. *Mol. Pharmacol.* 77(3):459-468(2010)
3. Li, X., Li, J., Peng, X.Q., et al. Metabotropic glutamate receptor 7 modulates the rewarding effects of cocaine in rats: Involvement of a ventral pallidal GABAergic mechanism. *Neuropsychopharmacology* 34(7):1783-1796(2009)
4. Benn, A., and Robinson,

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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E.S.J. Investigating glutamatergic mechanism in attention and impulse control using rats in a modified 5-choice serial reaction time task *PLoS One* 9(12)(2014) 5. Palazzo, E., Romano, R., Luongo, L., et al. MMPIP, an mGluR7-selective negative allosteric modulator, alleviates pain and normalizes affective and cognitive behavior in neuropathic mice *Pain* 156(6)1060-1073(2015) 6. Kammemeier, P.J. Constitutive activity of metabotropic glutamate receptor 7 *BMC Neurosci.* 16:17(2015)

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