

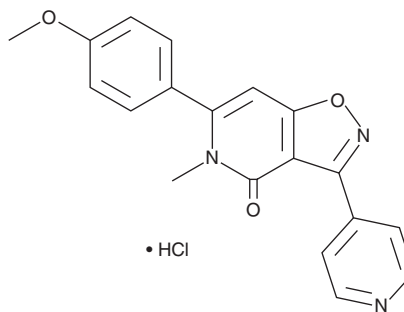
PRODUCT INFORMATION



MMPIP (hydrochloride)

Item No. 18862

CAS Registry No.: 1215566-78-1
Formal Name: 6-(4-methoxyphenyl)-5-methyl-3-(4-pyridinyl)-isoxazolo[4,5-c]pyridin-4(5H)-one, monohydrochloride
MF: C₁₉H₁₅N₃O₃ • HCl
FW: 369.8
Purity: ≥98%
Supplied as: A solid
Storage: Room temperature
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

MMPIP (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the MMPIP (hydrochloride) in the solvent of choice, which should be purged with an inert gas. MMPIP (hydrochloride) is soluble in the organic solvent DMSO at a concentration of approximately 10 mM.

Description

MMPIP is a reversible allosteric antagonist of the metabotropic glutamate receptor 7 (mGluR7) that blocks agonist-induced calcium mobilization (IC₅₀ = 26 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.³⁻⁵ MMPIP also reversibly inhibits constitutive activity of mGluR7 in sympathetic neurons from the rat superior cervical ganglion.⁶

References

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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, 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).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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