

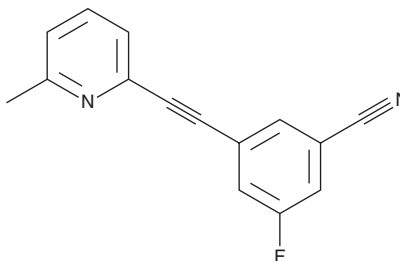
PRODUCT INFORMATION



MFZ 10-7

Item No. 42024

CAS Registry No.: 1224431-15-5
Formal Name: 3-fluoro-5-[2-(6-methyl-2-pyridinyl)ethynyl]-benzonitrile
MF: $C_{15}H_9FN_2$
FW: 236.2
Purity: $\geq 98\%$
Supplied as: A solid
Storage: $-20^{\circ}C$
Stability: ≥ 4 years



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

Laboratory Procedures

MFZ 10-7 is supplied as a solid. A stock solution may be made by dissolving the MFZ 10-7 in the solvent of choice, which should be purged with an inert gas. MFZ 10-7 is sparingly soluble (1-10 mg/ml) in ethanol and DMSO.

Description

MFZ 10-7 is a negative allosteric modulator (NAM) and inverse agonist of metabotropic glutamate receptor 5 (mGluR5).¹ It selectively binds to mGluR5 ($K_i = 0.67$ nM) over a panel of 63 additional receptors and ion channels at 100 nM. MFZ 10-7 reduces D-myo-inositol 1 phosphate (1-IP₁; Item No. 1000777) accumulation, a marker of D-myo-inositol-1,4,5-triphosphate (1,4,5-IP₃; Item No. 10008205) production, in an ELISA-based immunocompetitive assay using HEK293A cells expressing rat mGluR5 ($IC_{50} = 2.4$ nM). *In vivo*, MFZ 10-7 (0.3 mg/kg) increases the number of transitions between the light and dark area in a light-dark exploration test, indicating anxiolytic-like activity, and increases locomotor activity in the open field test in mice. It inhibits cocaine self-administration in rats when administered at doses of 3 or 10 mg/kg.²

References

1. Keck, T.M., Zou, M.F., Zhang, P., *et al.* Metabotropic glutamate receptor 5 negative allosteric modulators as novel tools for in vivo investigation. *ACS Med. Chem. Lett.* **3**(7), 544-549 (2012).
2. Keck, T.M., Zou, M.-F., Bi, G.-H., *et al.* A novel mGluR5 antagonist, MFZ 10-7, inhibits cocaine-taking and cocaine-seeking behavior in rats. *Addict. Biol.* **19**(2), 195-209 (2014).

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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