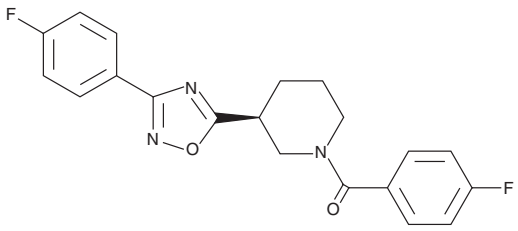
PRODUCT INFORMATION

ADX-47273

Item No. 17987

CAS Registry No.:	851881-60-2
Formal Name:	(4-fluorophenyl)[(3S)-3-[3-(4-fluorophenyl)-1,2,4-oxadiazol-5-yl]-1-piperidinyl]-methanone
MF:	$C_{20}H_{17}F_2N_3O_2$
FW:	369.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 237 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

ADX-47273 is supplied as a crystalline solid. A stock solution may be made by dissolving the ADX-47273 in the solvent of choice, which should be purged with an inert gas. ADX-47273 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of ADX-47273 in ethanol and DMF is approximately 2 mg/ml and approximately 30 mg/ml in DMSO.

ADX-47273 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ADX-47273 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. ADX-47273 has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

ADX-47273 is a positive allosteric modulator of metabotropic glutamate receptor 5 (mGluR5) with EC_{50} values of 0.17 and 0.23 µM for potentiation of glutamate activity in HEK293 cells expressing rat mGluR5 and primary astrocyte cultures, respectively.[1] It is selective for mGluR5 over rat mGluR1 and human mGluR1 and mGluR4 when used at concentrations up to 10 µM. *In vivo*, ADX-47273 (1 and 10 mg/kg, i.p.) increases ERK and CREB phosphorylation in the hippocampus and prefrontal cortex in rats. It decreases the conditioned avoidance response, apomorphine-induced climbing, as well as PCP-, apomorphine-, and amphetamine-induced locomotor activity in rats in a dose-dependent manner, indicating antipsychotic-like activity. ADX-47273 (0.1-50 mg/kg, i.p) improves recall in a novel object recognition test and reduces impulsivity in the 5-choice serial reaction time task (5CSRTT). It also enhances reversal learning in mice in the Morris water maze test.[2]

References

1. Liu, F.G., Grauer, S., Kelley, C., *et al.* ADX47273 [S-(4-fluoro-phenyl)-{3-[3-(4-fluoro-phenyl)-[1,2,4]-oxadiazol-5-yl]-piperidin-1-yl}-methanone]: A novel metabotropic glutamate receptor 5-selective positive allosteric modulator with preclinical antipsychotic-like and procognitive activities. *J. Pharmacol. Exp. Ther.* **327(3)**, 827-839 (2008).
2. Xu, J., Zhu, Y., Kraniotis, S., *et al.* Potentiating mGluR5 function with a positive allosteric modulator enhances adaptive learning. *Learn Mem.* **20(8)**, 438-445 (2013).

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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