

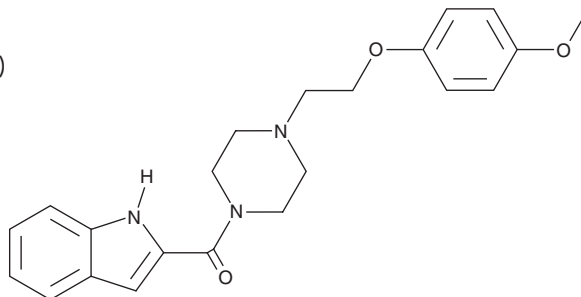
# PRODUCT INFORMATION



**ML-417**

Item No. 36582

**CAS Registry No.:** 1386162-69-1  
**Formal Name:** 1H-indol-2-yl[4-[2-(4-methoxyphenoxy)ethyl]-1-piperazinyl]-methanone  
**MF:** C<sub>22</sub>H<sub>25</sub>N<sub>3</sub>O<sub>3</sub>  
**FW:** 379.5  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 218, 294 nm  
**Supplied as:** A 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

ML-417 is supplied as a solid. A stock solution may be made by dissolving the ML-417 in the solvent of choice, which should be purged with an inert gas. ML-417 is soluble in ethanol.

## Description

ML-417 is a dopamine D<sub>3</sub> receptor agonist.<sup>1</sup> It is selective for the dopamine D<sub>3</sub> receptor over the dopamine D<sub>2</sub> receptor (EC<sub>50</sub>s = 38 and >10,000 nM, respectively, in β-arrestin recruitment assays using CHO-K1 cells expressing the human receptors) and dopamine D<sub>1</sub>, D<sub>4</sub>, and D<sub>5</sub> receptors, as well as a panel of 45 G protein-coupled receptors (GPCRs), transporters, and ion channels at 10 μM. ML-417 inhibits forskolin-induced cAMP accumulation in HEK293 cells expressing the human dopamine D<sub>3</sub> receptor (IC<sub>50</sub> = 86 nM) and induces phosphorylation of ERK in CHO-K1 cells expressing the human dopamine D<sub>3</sub> receptor (EC<sub>50</sub> = 21 nM). It protects against cell death induced by the catecholaminergic neurotoxin 6-OHDA (Item No. 25330) in human induced pluripotent stem cell-derived (iPSC-derived) cells differentiated into dopaminergic neurons when used at a concentration of 50 nM.

## Reference

1. Moritz, A.E., Free, R.B., Weiner, W.S., *et al.* Discovery, optimization, and characterization of ML417: A novel and highly selective D<sub>3</sub> dopamine receptor agonist. *J. Med. Chem.* **63**(10), 5526-5567 (2020).

### 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.

### WARRANTY AND LIMITATION OF REMEDY

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