

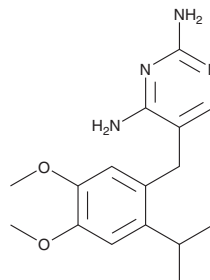
# PRODUCT INFORMATION



## RO-3

Item No. 29635

**CAS Registry No.:** 1026582-88-6  
**Formal Name:** 5-[[4,5-dimethoxy-2-(1-methylethyl)phenyl]methyl]-2,4-pyrimidinediamine  
**MF:** C<sub>16</sub>H<sub>22</sub>N<sub>4</sub>O<sub>2</sub>  
**FW:** 302.4  
**Purity:** ≥98%  
**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

RO-3 is supplied as a crystalline solid. A stock solution may be made by dissolving the RO-3 in the solvent of choice, which should be purged with an inert gas. RO-3 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of RO-3 in these solvents is approximately 1, 12, and 20 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of RO-3 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of RO-3 in PBS, pH 7.2, is approximately 0.2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

RO-3 is a dual antagonist of the purinergic receptor subtypes P2X<sub>3</sub> and P2X<sub>2/3</sub> (IC<sub>50</sub>s = 0.1 and 1.26 μM, respectively).<sup>1</sup> It is selective for P2X<sub>3</sub> and P2X<sub>2/3</sub> over P2X<sub>1</sub>, P2X<sub>2</sub>, P2X<sub>4</sub>, P2X<sub>5</sub>, and P2X<sub>7</sub> receptors (IC<sub>50</sub>s = >10 μM for all) but is an antagonist of ML<sub>1</sub>-type melatonin receptors (IC<sub>50</sub> = 0.398 μM).

### Reference

1. Ford, A.P.D.W., Gever, J.R., Nunn, P.A., *et al.* Purinoceptors as therapeutic targets for lower urinary tract dysfunction. *Br. J. Pharmacol.* **147(Suppl. 2)**, S132-S143 (2006).

#### 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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