# PRODUCT INFORMATION

## MLS-1547

*Item No. 27648*

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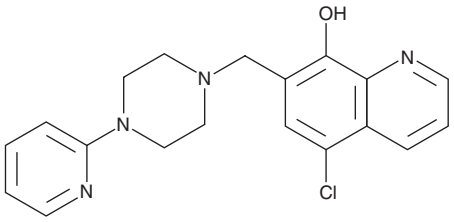
|---|---|
| **CAS Registry No.:** | 315698-36-3 |
| **Formal Name:** | 5-chloro-7-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-8-quinolinol |
| **MF:** | $C_{19}H_{19}ClN_4O$ |
| **FW:** | 354.8 |
| **Purity:** | ≥98% |
| **UV/Vis.:** | $\lambda_{max}$: 251, 309 nm |
| **Supplied as:** | A crystalline solid |
| **Storage:** | -20°C |
| **Stability:** | ≥4 years |




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

### Laboratory Procedures

MLS-1547 is supplied as a crystalline solid. A stock solution may be made by dissolving the MLS-1547 in the solvent of choice, which should be purged with an inert gas. MLS-1547 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of MLS-1547 in these solvents is approximately 5, 10, and 20 mg/ml, respectively.

MLS-1547 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, MLS-1547 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. MLS-1547 has a solubility of approximately 0.1 mg/ml in a 1:9 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

MLS-1547 is a G protein-biased agonist of dopamine $D_2$ receptors ($EC_{50}$ = 0.37 µM in a calcium mobilization assay).[1] It inhibits forskolin-induced cAMP accumulation in CHO cells expressing human $D_2$ receptors ($EC_{50}$ = 0.26 µM) but is inactive in β-arrestin recruitment assays. MLS-1547 antagonizes dopamine-induced β-arrestin recruitment in cell-based assays with $IC_{50}$ values ranging from 3.8 to 9.9 µM.[1] It is also an inhibitor of type II secretion in Gram-negative bacteria.[2] MLS-1547 inhibits secretion of phospholipase C (PlcH/N) and the virulence factor elastase (LasB) from *P. aeruginosa* ($IC_{50}$s = 15 and 13 µM, respectively) and inhibits *B. pseudomallei* protease secretion by 90.8% when used at a concentration of 25 µM.

### References


1. Free, R.B., Chun, L.S., Moritz, A.E., *et al.* Discovery and characterization of a G protein-biased agonist that inhibits β-arrestin recruitment to the $D_2$ dopamine receptor. *Mol. Pharmacol.* **86(1)**, 96-105 (2014).
2. Moir, D.T., Di, M., Wong, E., *et al.* Development and application of a cellular, gain-of-signal, bioluminescent reporter screen for inhibitors of type II secretion in *Pseudomonas aeruginosa* and *Burkholderia pseudomallei*. *J. Biomol. Screen.* **16(7)**, 694-705 (2011).





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