

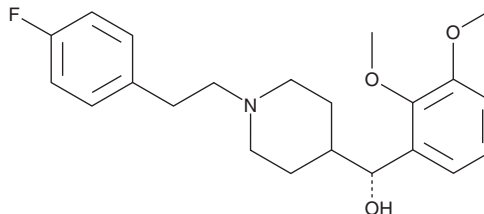
# PRODUCT INFORMATION



## Volinanserin

Item No. 15936

**CAS Registry No.:** 139290-65-6  
**Formal Name:**  $\alpha$ R-(2,3-dimethoxyphenyl)-1-[2-(4-fluorophenyl)ethyl]-4-piperidinemethanol  
**Synonym:** MDL 100907  
**MF:** C<sub>22</sub>H<sub>28</sub>FNO<sub>3</sub>  
**FW:** 373.5  
**Purity:**  $\geq$ 95%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 4 years



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

### Laboratory Procedures

Volinanserin is supplied as a crystalline solid. A stock solution may be made by dissolving the volinanserin in the solvent of choice, which should be purged with an inert gas. Volinanserin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of volinanserin in these solvents is approximately 20, 15, and 25 mg/ml, respectively.

Volinanserin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, volinanserin should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Volinanserin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Volinanserin is a potent and selective antagonist of the serotonin receptor 5-HT<sub>2A</sub> (K<sub>i</sub> = 0.36-0.85 nM).<sup>1,2</sup> It weakly binds 5-HT<sub>2C</sub>,  $\alpha_1$ -adrenergic, and sigma receptors (K<sub>i</sub> = 88, 128, and 87 nM) and much less effectively associates with other serotonin, dopamine, adrenergic, muscarinic acetylcholine receptors and monoamine transporters.<sup>2,3</sup> Volinanserin displays antipsychotic activity, attenuates impulsivity, and augments antidepressant effects *in vivo*.<sup>1,4,5</sup>

### References

1. Sorensen, S.M., Kehne, J.H., Fadayel, G.M., *et al.* Characterization of the 5-HT<sub>2</sub> receptor antagonist MDL 100907 as a putative atypical antipsychotic: Behavioral, electrophysiological and neurochemical studies. *J. Pharmacol. Exp. Ther.* **266**(2), 684-691 (1993).
2. Kehne, J.H., Baron, B.M., Carr, A.A., *et al.* Preclinical characterization of the potential of the putative atypical antipsychotic MDL 100,907 as a potent 5-HT<sub>2A</sub> antagonist with a favorable CNS safety profile. *J. Pharmacol. Exp. Ther.* **277**(2), 968-981 (1996).
3. Pehek, E.A., Nocjar, C., Roth, B.L., *et al.* Evidence for the preferential involvement of 5-HT<sub>2A</sub> serotonin receptors in stress- and drug-induced dopamine release in the rat medial prefrontal cortex. *Neuropsychopharmacology* **31**(2), 265-277 (2006).
4. Ardayfio, P.A., Benvenga, M.J., Chaney, S.F., *et al.* The 5-hydroxytryptamine<sub>2A</sub> receptor antagonist R-(+)- $\alpha$ -(2,3-dimethoxyphenyl)-1-[2-(4-fluorophenyl)ethyl]-4-piperidinemethanol (M100907) attenuates impulsivity after both drug-induced disruption (dizocilpine) and enhancement (antidepressant drugs) of differential-reinforcement-of-low-rate 72-s behavior in the rat. *J. Pharmacol. Exp. Ther.* **327**(3), 891-897 (2008).
5. Boothman, L.J., Mitchell, S.N., and Sharp, T. Investigation of the SSRI augmentation properties of 5-HT<sub>2</sub> receptor antagonists using *in vivo* microdialysis. *Neuropharmacology* **50**(6), 726-732 (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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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