PRODUCT INFORMATION



Pimavanserin

Item No. 23462

CAS Registry No.:	706779-91-1	
Formal Name:	N-[(4-fluorophenyl)methyl]-N-(1-	
	methyl-4-piperidinyl)-N'-[[4-(2-	
	methylpropoxy)phenyl]methyl]-urea	N I
MF:	C ₂₅ H ₃₄ FN ₃ O ₂	
FW:	427.6	
Purity:	≥98%	
UV/Vis.:	λ _{max} : 226 nm	
Supplied as:	A crystalline solid	U O
Storage:	-20°C	
Stability:	≥4 years	
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.		

Laboratory Procedures

Pimavanserin is supplied as a crystalline solid. A stock solution may be made by dissolving the pimavanserin in the solvent of choice. Pimavanserin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of pimavanserin in these solvents is approximately 33 mg/ml.

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

Description

Pimavanserin is an inverse agonist of the serotonin (5-HT) receptor subtype 5-HT_{2A} (IC₅₀ = 1.86 nM; K_i = 0.5 nM).¹ It is selective for 5-HT_{2A} over a panel of 65 ion channels, enzymes, and receptors $(K_{is} = >100 \text{ nM})$. Pimavanserin reduces head-twitch behavior and prepulse inhibition deficits induced by the 5-HT_{2A} receptor agonist DOI (Item No. 13885) in rats at doses of 3 mg/kg, p.o., and 1-10 mg/kg, s.c., respectively. It also exhibits antipsychotic-like activity, reducing hyperactivity induced by (+)-MK-801 (Item No. 10009019) in mice. Pimavanserin acts synergistically with haloperidol (Item No. 12014) or risperidone (Item No. 13629) to suppress (+)-MK-801-induced hyperactivity and attenuates haloperidol- and risperidone-induced catalepsy in rats.² Formulations containing pimavanserin have been used for the treatment of psychosis in Parkinson's disease.³

References

- 1. Vanover, K.E., Weiner, D.M., Makhay, M., et al. Pharmacological and behavioral profile of N-(4-fluorophenylmethyl)-N-(1-methylpiperidin-4-yl)-N'-(4-(2-methylpropyloxy)phenylmethyl) carbamide (2R,3R)-dihydroxybutanedioate (2:1) (ACP-103), a novel 5-hydroxytryptamine₂₀ receptor inverse agonist. J. Pharmacol. Exp. Ther. 318(2), 910-918 (2006).
- 2. Gardell, L.R., Vanover, K.E., Pounds, L., et al. ACP-103, a 5-hydroxytryptamine 2A receptor inverse agonist, improves the antipsychotic efficacy and side-effect profile of haloperidol and risperidone in experimental models. J. Pharmacol. Exp. Ther. 322(2), 862-870 (2007).
- 3. Goldman, J.G. and Holden, S. Treatment of psychosis and dementia in Parkinson's disease. Curr. Treat. Options. Neurol. 16(3), 281 (2014).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFFTY 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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