

Product Data Sheet

Product Name: Blonanserin

Cat. No.: GC14160

Chemical Properties

Cas. No. 132810-10-7

Chemical Name 2-(4-ethylpiperazin-1-yl)-4-(4-fluorophenyl)-5,6,7,8,9,10-hexahydrocycloocta[b]pyridine

SMILES CCN1CCN(CC1)C2=NC3=C(CCCCCC3)C(=C2)C4=CC=C(C=C4)F

Formula $C_{23}H_{30}FN_3$

M.Wt 367.5

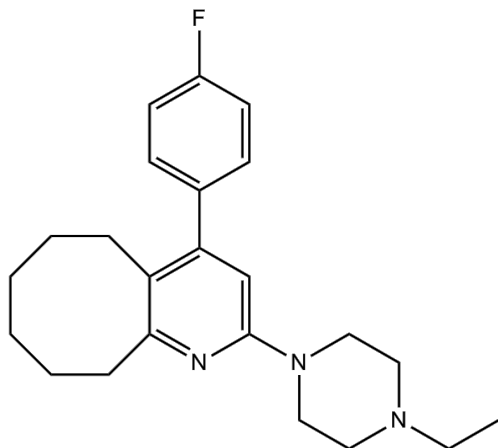
Solubility $\geq 9.2\text{mg/mL}$ in DMSO

Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Blonanserin(AD-5423) is a D2/5-HT2 receptor antagonist, atypical antipsychotic. Target: D2 receptor; 5-HT2 receptor. Blonanserin(AD-5423) is a relatively new atypical antipsychotic for the treatment of schizophrenia. Blonanserin belongs to a series of 4-phenyl-2-(1-piperazinyl)pyridines and acts as an antagonist at dopamine D2, D3, and serotonin 5-HT2A receptors. Blonanserin has low affinity for 5-HT2C, adrenergic α_1 , histamine H1, and muscarinic M1 receptors, but displays relatively high affinity

Caution: Product has not been fully validated for medical applications. For research use only.

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for 5-HT₆ receptors [1]. AD-5423 bound preferentially to dopamine (DA)-D₂ (K_i, 14.8 nM; cf. haloperidol, 8.79 nM; and clozapine, 149 nM) and serotonin (5-HT)-S₂ (K_i, 3.98 nM; cf. haloperidol, 26.8 nM; and clozapine, 8.66 nM) receptors. It displayed low affinity for adrenaline (Ad)-alpha-1 (K_i, 56.3 nM) receptors and was virtually devoid of binding to DA-D₁ (K_i, 2870 nM), 5-HT-S₃, Ad-alpha-2, Ad-beta, muscarine, tau-aminobutyric acid and benzodiazepine receptors. In addition, AD-5423 was only a weak inhibitor of DA, 5-HT and noradrenaline uptake systems. AD-5423 (0.2-2 mg/kg p.o.) decreased exploratory activity in mice. AD-5423 (10 mg/kg p.o.), unlike haloperidol, did not antagonize SKF38393-induced vacuous oral movements in rats. Head twitches induced by 1-(2,5-dimethoxy-4-iodophenyl)-2-aminopropane in mice and by para-chloroamphetamine in rats were antagonized by AD-5423 at much lower doses (0.5-2 mg/kg p.o.) than those of haloperidol and clozapine [2].

References:

- [1]. Tenjin, T., et al., Profile of blonanserin for the treatment of schizophrenia. *Neuropsychiatr Dis Treat*, 2013. 9: p. 587-94.
- [2]. Oka, M., et al., Pharmacological profile of AD-5423, a novel antipsychotic with both potent dopamine-D₂ and serotonin-S₂ antagonist properties. *J Pharmacol Exp Ther*, 1993. 264(1): p. 158-65.

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