Blonanserin dihydrochloride

Cat. No.: HY-13575A

CAS No.: 132812-45-4

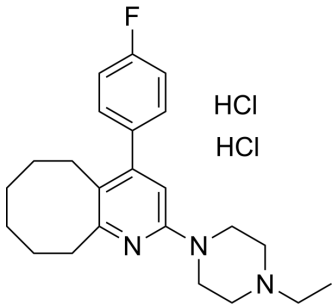
Molecular Formula: $C_{23}H_{32}Cl_2FN_3$

Molecular Weight: 440.42

Target: 5-HT Receptor; Dopamine Receptor; Adrenergic Receptor; Sigma Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Blonanserin dihydrochloride is a potent and orally active 5-HT_{2A} and dopamine D2 receptor antagonist, with K_i values of 0.812 and 0.142 nM, respectively. Blonanserin dihydrochloride is usually acts as an atypical antipsychotic agent, and can be used for the research of extrapyramidal symptoms, excessive sedation, or hypotension[1][2].

IC_{50} & Target

D_2 Receptor 0.142 nM (Ki)	D_3 Receptor 0.494 nM (Ki)	D_4 Receptor 150 nM (Ki)	D_1 Receptor 1070 nM (Ki)
5-HT_{2A} Receptor 0.812 nM (Ki)	5-HT_{2C} Receptor 26.4 nM (Ki)	5-HT_6 Receptor 11.7 nM (Ki)	α1-adrenergic receptor 26.7 nM (Ki)
α2-adrenergic receptor 530 nM (Ki)			

In Vitro

Blonanserin dihydrochloride exerts some blockade of α1-adrenergic receptors (K_i=26.7 nM) and also shows significant affinity for the D3 receptor (K_i=0.494 nM). Blonanserin dihydrochloride possesses low affinity for the sigma receptor (IC_{50} =286 nM), but lacks significant affinity for numerous other sites including the 5-HT1A, 5-HT3, D1, α2-adrenergic, β-adrenergic, H1, and mACh receptors and the monoamine transporters[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Blonanserin dihydrochloride (Oral gavage; 1 mg/kg; once a day for 14 days) significantly ameliorates the social deficit observed in PCP-administered mice and inhibits the decrease in the levels of Ser897-phosphorylation, but preatment with blonanserin does not affect the social behaviors in saline-administered mice[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Mice received saline or phencyclidine once a day for 14 consecutive days[2]
Dosage:	1 mg/kg
Administration:	Oral gavage; once a day for 14 days
Result:	Had an effect on the social deficit in mice that received repeated PCP administration.

REFERENCES

[1]. Blonanserin

[2]. Saori Takeuchi, et al. Blonanserin ameliorates social deficit through dopamine-D 3 receptor antagonism in mice administered phencyclidine as an animal model of schizophrenia. Neurochem Int. 2019 Sep;128:127-134.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA