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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

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- Gefahrgutzuschlag
- Expressversand

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Amisulpride hydrochloride

Cat. No.: HY-14545A

CAS No.: 81342-13-4

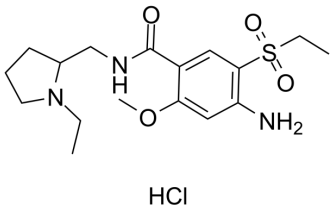
Molecular Formula: $C_{17}H_{28}ClN_3O_4S$

Molecular Weight: 405.94

Target: Dopamine Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage: 4°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (246.34 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.4634 mL	12.3171 mL	24.6342 mL
	5 mM	0.4927 mL	2.4634 mL	4.9268 mL
	10 mM	0.2463 mL	1.2317 mL	2.4634 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (6.16 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (6.16 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.16 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Amisulpride hydrochloride is a dopamine D_2/D_3 receptor antagonist with K_is of 2.8 and 3.2 nM for human dopamine D_2 and D_3, respectively.

IC_{50} & Target

Ki: 2.8 nM (D_2 receptor), 3.2 nM (D_3 receptor)

In Vitro

Amisulpride hydrochloride is an atypical dopamine D_2/D_3 receptor antagonist with K_is of 2.8 and 3.2 nM for human dopamine D_2 and D_3, respectively. Amisulpride hydrochloride (100 nM) inhibits quinpirole-elicited [^{3}H]thymidine incorporation with an IC_{50} value of 22±3 nM (n=3). Amisulpride hydrochloride slightly but significantly increases [^{3}H]dopamine release from slices of the rat striatum (S_2/S_1=0.88±0.04 under control conditions, n=6; 1.04±0.08 in the presence

	of 100 nM Amisulpride hydrochloride,n=4; P<0.05) and opposes the inhibitory effects of 7-OH-DPAT in both brain areas[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Only the highest dose of Amisulpride hydrochloride (100 mg/kg) significantly reduces dopamine levels in the striatum or limbic system. Amisulpride hydrochloride significantly increases the synthesis of dopamine in the rat striatum and limbic system at doses of 20 and 100 mg/kg. Amisulpride hydrochloride (0.5 to 75 mg/kg) fails to provoke an additional increase in dopa accumulation in the striatum but slightly accelerates, at 75 mg/kg, dopamine synthesis in the limbic system. In comparison with vehicle-treated controls, Amisulpride hydrochloride (10 mg/kg) increases extracellular dopamine levels. The administration of Amisulpride hydrochloride (0.5 to 15 mg/kg s.c.) provokes a time- and dose-dependent increase in the stimulation-evoked dopamine release. Amisulpride hydrochloride decreases striatal ACh levels significantly at 30 and 100 mg/kg (87.5% and 56.3% of control levels, respectively)[1]. In both acute study, Amisulpride hydrochloride (70 mg/kg, p.o.) significantly increases the duration of swimming behavior [F(3,28)=45.90, p<0.01][2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [1]	The functional effects of Amisulpride hydrochloride at the dopamine D_3 receptor subtype are assessed. Briefly, the mitogenic response elicited in NG108-15 neuroblastoma-glioma cells stably transfected with human dopamine D_3 receptor cDNA by the addition of 10 nM quinpirole in the presence of 1 μM forskolin is quantified by the incorporation of [^{3}H]thymidine. Antagonism of quinpirole-induced mitogenesis is measured in the presence of increasing (0.1 to 100 nM) concentrations of Amisulpride hydrochloride[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Administration [2]	A total of 64 male Swiss albino mice weighing between 20 to 30 g are used. The animals are fed with standard pellet diet and water ad libitum. The mice are divided in different groups (n=8 in each group) and drug administration is done as follows: Group 1 (control): distilled water (1 mL/kg) 23.5, 5 and 1 h before the test. Group 3 (Amisulpride hydrochloride): Amisulpride hydrochloride (70 mg/kg) 23.5, 5 and 1 h before the test[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Schoemaker H, et al. Neurochemical characteristics of amisulpride, an atypical dopamine D2/D3 receptor antagonist with both presynaptic and limbic selectivity. J Pharmacol Exp Ther. 1997 Jan;280(1):83-97.

[2]. Pawar GR, et al. Evaluation of antidepressant like property of amisulpride per se and its comparison with fluoxetine and olanzapine using forced swimming test in albino mice. Acta Pol Pharm. 2009 May-Jun;66(3):327-31.

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