3-Bromocytisine

Cat. No.: HY-107684

CAS No.: 207390-14-5

Molecular Formula: $C_{11}H_{13}BrN_2O$

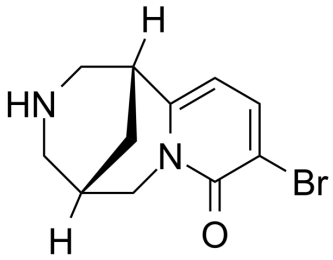
Molecular Weight: 269.14

Target: nAChR

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling

Storage:

Powder	-20°C	3 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (371.55 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.7155 mL	18.5777 mL	37.1554 mL
	5 mM	0.7431 mL	3.7155 mL	7.4311 mL
	10 mM	0.3716 mL	1.8578 mL	3.7155 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 (9.29 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (9.29 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (9.29 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

3-Bromocytisine (3-Br-cytisine) is a potent nACh receptors agonist, with IC_{50}s are 0.28, 0.30 and 31.6 nM for hα4β4, hα4β2, and hα7-nACh, respectively. 3-Bromocytisine (3-Br-cytisine) shows different effects on high (HS) and low (LS) ACh sensitivity α4β2 nAChRs with EC_{50}s are 8 and 50 nM, respectively[1][2].

IC_{50} & Target

IC50: 0.28 nM (hα4β4), 0.30 nM (hα4β2), 31.6 nM (hα7)[1]

REFERENCES

[1]. Houlihan LM, et al. Activity of cytisine and its brominated isosteres on recombinant human alpha7, alpha4beta2 and alpha4beta4 nicotinic acetylcholine receptors. J Neurochem. 2001 Sep;78(5):1029-43.

[2]. Moroni M, et al. alpha4beta2 nicotinic receptors with high and low acetylcholine sensitivity: pharmacology, stoichiometry, and sensitivity to long-term exposure to nicotine. Mol Pharmacol. 2006 Aug;70(2):755-68.

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