Product Data Sheet

Product Name: Rivanicline hemioxalate
Cat. No.: GC37544

Chemical Properties

Cas. No.			
SMILES	CNCC/C=C/C1=CC=CN=C1.OC(C(O)=O)=O.[0.5]		
Formula	$C_{11}H_{15}N_2O_2$	M.Wt	207.23
Solubility	DMSO: 50 mg/mL (241.28 mM)	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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	Rivanicline hemioxalate		

Background

Rivanicline hemioxalate (RJR-2403 hemioxalate) is a neuronal nicotinic receptor agonist, showing high selectivity for the α4β2 subtype (Ki=26 nM); > 1,000 fold selectivity than α7 receptors(Ki= 36000 nM).IC50 value: 26 nM [1]Target: α4β2 nAChRin vitro: At concentrations up to 1 mM, Rivanicline does not significantly activate nAChRs in PC12 cells, muscle type nAChRs or muscarinic receptors. Dose-response curves for agonist-induced ileum contraction indicate that Rivanicline is less than one-tenth as potent as nicotine with greatly reduced efficacy. Rivanicline does not antagonize nicotine-stimulated muscle or ganglionic nAChR function (IC50 > 1 mM). Chronic exposure of M10 cells to Rivanicline (10 microM) results in an up-regulation of high-affinity nAChRs phenomenologically similar to that seen with nicotine [1].in vivo: Rivanicline significantly improved passive avoidance retention after scopolamine-induced amnesia and enhanced both working and reference memory in rats with ibotenic acid lesions of the forebrain cholinergic projection system in an 8-arm radial maze paradigm. By comparison, Rivanicline was 15 to 30-fold less potent than nicotine in decreasing body temperature, respiration, Y-maze rears and crosses and acoustic startle response [2]. Metanicotine was about 5-fold less potent than nicotine in the tail-flick test after s.c

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

administration, but slightly more potent after central administration [3].

[1]. Bencherif M, et al. RJR-2403: a nicotinic agonist with CNS selectivity I. In vitro characterization. J Pharmacol Exp Ther. 1996 Dec;279(3):1413-21. [2]. Lippiello PM, et al. RJR-2403: a nicotinic agonist with CNS selectivity II. In vivo characterization. J Pharmacol Exp Ther. 1996 Dec;279(3):1422-9. [3]. Damaj MI, et al. Antinociceptive and pharmacological effects of metanicotine, a selective nicotinic agonist. J Pharmacol Exp Ther. 1999 Oct;291(1):390-8.