
Product Data Sheet

Product Name: Rivanicline

Cat. No.: GC37543

Chemical Properties

Cas. No. 15585-43-0

SMILES CNCC/C=C/C1=CC=CN=C1

Formula C₁₀H₁₄N₂

M.Wt

162.23

Solubility Soluble 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**

Rivanicline (RJR-2403) is a neuronal nicotinic receptor agonist, showing high selectivity for the $\alpha 4\beta 2$ subtype ($K_i=26$ nM); > 1,000 fold selectivity than $\alpha 7$ receptors ($K_i= 36000$ nM). IC₅₀ value: 26 nM [1] Target: $\alpha 4\beta 2$ nAChR in 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]. Metan nicotine was about 5-fold less potent than nicotine in the tail-flick test after s.c administration, but slightly more potent after central

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

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.

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA