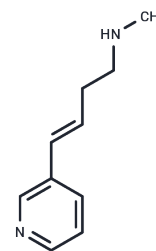


## Rivanicline

## Chemical Properties

CAS No. :	15585-43-0
Formula:	C10H14N2
Molecular Weight:	162.23
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Rivanicline is a neuronal nicotinic receptor agonist, showing high selectivity for the $\alpha 4\beta 2$ subtype ( $K_i=26$ nM). It show > 1,000 fold selectivity than $\alpha 7$ receptors( $K_i= 36000$ nM and $IC_{50} : 26$ nM).
Targets( $IC_{50}$ )	Others,AChR
In vitro	Rivanicline does not antagonize nicotine-stimulated muscle or ganglionic nAChR function ( $IC_{50} >1$ 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. 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 [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. Metanicotine was about 5-fold less potent than nicotine in the tail-flick test after s.c administration, but slightly more potent after central administration [2][3].

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	6.1641 mL	30.8204 mL	61.6409 mL
5 mM	1.2328 mL	6.1641 mL	12.3282 mL
10 mM	0.6164 mL	3.082 mL	6.1641 mL
50 mM	0.1233 mL	0.6164 mL	1.2328 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

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.

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.

Damaj MI, et al. Antinociceptive and pharmacological effects of metanicotine, a selective nicotinic agonist. J Pharmacol Exp Ther. 1999 Oct;291(1):390-8.

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