Web: www.taiclone.com
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Rivanicline

Catalog No: tcsc0532

Available Sizes

Size: 10mg

Size: 50mg

Specifications

CAS No:
15585-43-0

Formula:
$C_{10}H_{14}N_2$

Pathway:
Neuronal Signaling;Membrane Transporter/Ion Channel

Target:
nAChR;nAChR

Purity / Grade:
>98%

Solubility:
10 mM in DMSO

Alternative Names:
RJR-2403;(E)-Metanicotine

Observed Molecular Weight:
162.23

Product Description

Rivanicline (RJR-2403) 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).

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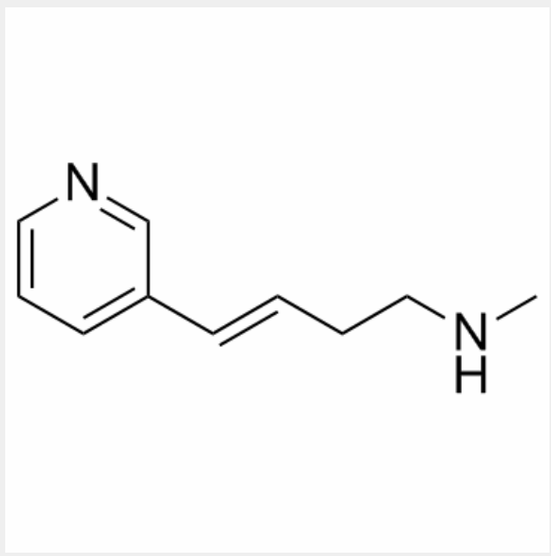
IC50 value: 26 nM [1]

Target: α4β2 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]. 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 [3].



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