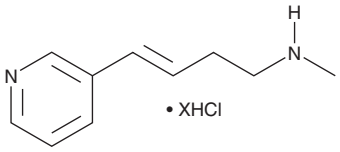
PRODUCT INFORMATION

Rivanicline (hydrochloride)

Item No. 42184

Formal Name:	(E)-N-methyl-4-(pyridin-3-yl)but-3-en-1-amine, hydrochloride
Synonyms:	RJR-2403, *trans*-Metanicotine
MF:	$C_{10}H_{14}N_2$ • XHCl
FW:	162.2
Purity:	≥98%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Rivanicline (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the rivanicline (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Rivanicline (hydrochloride) is slightly soluble (0.1-1 mg/ml) in acetonitrile and sparingly soluble (1-10 mg/ml) in DMSO.

Rivanicline (hydrochloride) is slightly soluble (0.1-1 mg/ml) in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Rivanicline is an agonist of α4β2 subunit-containing nicotinic acetylcholine receptors (nAChRs).[1] It selectively induces rubidium ion efflux in M10 cells expressing α4β2 subunit-containing nAChRs (EC_{50} = 0.73 µM for the chicken channels) over M10 cells expressing α3β4- or α1β1γδ subunit-containing nAChRs (EC_{50}s = >1,000 nM for both for the chicken channels) and a panel of 34 receptors, ion channels, and kinases at 10 µM. It induces contractions in isolated guinea pig ileum (EC_{30} = 15 µM). Rivanicline (0.6 µmol/kg) prevents scopolamine-induced memory deficits in the passive avoidance test in mice.[2] It decreases the number of errors in the radial arm maze in a rat model of ibotenic acid-induced memory impairment when administered at doses of 0.3, 0.6 or 1.2 µmol/kg.

References

1. Bencherif, M., Lovette, M.E., Fowler, K.W., *et al.* RJR-2403: A nicotinic agonist with CNS selectivity I. *In vitro* characterization. *J. Pharmacol. Exp. Ther.* **279(3)**, 1413-1421 (1996).
2. Lippiello, P.M., Bencherif, M., Gray, J.A., *et al.* RJR-2403: A nicotinic agonist with CNS selectivity II. *In vivo* characterization. *J. Pharmacol. Exp. Ther.* **279(3)**, 1422-1429 (1996).

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