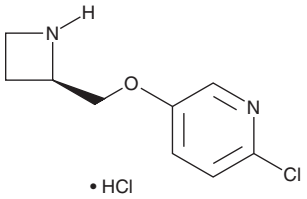
PRODUCT INFORMATION

ABT-594

Item No. 22822

CAS Registry No.:	203564-54-9
Formal Name:	5-[(2R)-2-azetidinylmethoxy]-2-chloro-pyridine, monohydrochloride
Synonyms:	Ebanicline, Tebanicline
MF:	$C_9H_{11}ClN_2O \bullet HCl$
FW:	235.1
Purity:	≥95%
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

ABT-594 is supplied as a solid. A stock solution may be made by dissolving the ABT-594 in the solvent of choice, which should be purged with an inert gas. ABT-594 is soluble in the organic solvent DMSO.

Description

ABT-594 is a potent agonist of neuronal α4β2 subunit-containing nicotinic acetylcholine receptors (nAChRs; K_i = 37 pM in a radioligand binding assay).[1] It is selective for neuronal nAChRs over neuromuscular α1β1δγ subunit-containing nAChRs (K_i = 10,000 nM), α_{1B}-, α_{2B}-, and α_{2C}-adrenergic receptors (K_is = 890, 597, and 342 nM, respectively), and 70 other receptors, enzymes, and transporters (K_is = >1,000 nM) in radioligand binding assays. ABT-594 induces [$^{86}Rb^+$] efflux in K177 cells transfected with human neuronal α4β2 subunit-containing nAChRs (EC_{50} = 140 nM). *In vivo*, ABT-594 (0.05 and 0.01 mg/kg, s.c.) increases latency to paw withdrawal in a hot-plate test in rats.[2] It also induces hypothermia, seizures, and an increase in blood pressure.

References

1. Donnelly-Roberts, D.L., Puttfarcken, P.S., Kuntzweiler, T.A., *et al.* ABT-594 [(R)-5-(2-azetidinylmethoxy)-2-chloropyridine]: A novel, orally effective analgesic acting via neuronal nicotinic acetylcholine receptors: I. *In vitro* characterization. *J. Pharmacol. Exp. Ther.* **285(2)**, 777-786 (1998).
2. Boyce, S., Webb, J.K., Shepheard, S.L., *et al.* Analgesic and toxic effects of ABT-594 resemble epibatidine and nicotine in rats. *Pain* **85(3)**, 443-450 (2000).

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