

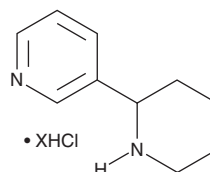
PRODUCT INFORMATION



(±)-Anabasine (hydrochloride)

Item No. 18206

Formal Name: 3-(piperidin-2-yl)pyridine, hydrochloride
MF: C₁₀H₁₄N₂ • XHCl
FW: 162.2
Purity: ≥95%
UV/Vis.: λ_{max}: 259 nm
Supplied as: A crystalline 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

(±)-Anabasine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the (±)-anabasine (hydrochloride) in water. The solubility of (±)-anabasine (hydrochloride) in water is approximately 18 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

(±)-Anabasine is an alkaloid that has been found as a minor component in tobacco (*Nicotiana*).¹ It is a full agonist of nicotinic acetylcholine receptors (nAChRs) that induces depolarization of TE 671 cells endogenously expressing human fetal muscle-type nAChRs (EC₅₀ = 10.1 μM) but not SH-SY5Y cells that primarily express autonomic nAChRs.² It binds to α4β2 subunit-containing nAChRs in K177 cells (K_i = 37.63 nM in a radioligand binding assay).³ (±)-Anabasine is teratogenic *in vivo*, inducing congenital defects, including cleft palate and severe fixed excessive flexure of carpal joints, in piglets when administered to pregnant dams during gestation days 43 through 53 at a dose of 2.6 mg/kg twice per day.⁴

References

1. Kisaki, T. and Tamaki, E. Phytochemical studies on the tobacco alkaloids—x. : Degradation of the tobacco alkaloids and their optical rotatory changes in tobacco plants. *Phytochemistry* **5(3)**, 293-300 (1966).
2. Green, B.T., Lee, S.T., Panter, K.E., *et al.* Actions of piperidine alkaloid teratogens at fetal nicotinic acetylcholine receptors. *Neurotoxicol. Teratol.* **32(3)**, 383-390 (2010).
3. Gopalakrishnan, M., Monteggia, L.M., Anderson, D.J., *et al.* Stable expression, pharmacologic properties and regulation of the human neuronal nicotinic acetylcholine α₄β₂ receptor. *J. Pharmacol. Exp. Ther.* **276(1)**, 289-297 (1996).
4. Keeler, R.F., Crowe, M.W., and Lambert, E.A. Teratogenicity in swine of the tobacco alkaloid anabasine isolated from *Nicotiana glauca*. *Teratology* **30(1)**, 61-69 (1984).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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