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Zuschläge

- Mindermengenzuschlag
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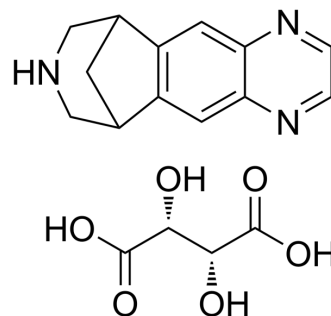
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Varenicline Tartrate (Standard)

Cat. No.:	HY-10021R
CAS No.:	375815-87-5
Molecular Formula:	C ₁₇ H ₁₉ N ₃ O ₆
Molecular Weight:	361.35
Target:	ERK; p38 MAPK; nAChR
Pathway:	MAPK/ERK Pathway; Stem Cell/Wnt; Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Varenicline (Tartrate) (Standard) is the analytical standard of Varenicline (Tartrate). This product is intended for research and analytical applications. Varenicline (CP 526555) is an orally active partial agonist of $\alpha 4\beta 2$ nicotinic acetylcholine receptor ($\alpha 4\beta 2$ nAChR, IC ₅₀ = 250 nM), which is the principal mediator of nicotine dependence. Varenicline is also a partial agonist of $\alpha 6\beta 2$ nAChR and a full agonist of $\alpha 6\beta 2$ nAChR. Varenicline blocks the direct agonist effects of nicotine on nAChR while stimulates nAChR in a more moderate way, being widely used as an aid of smoking cessation ^{[1][2][3][4][5]} .
IC₅₀ & Target	IC50: 250 nM ($\alpha 4\beta 2$ nAChR) ^[2]

REFERENCES

- [1]. Koegelenberg CF, et al. Efficacy of varenicline combined with nicotine replacement therapy vs varenicline alone for smoking cessation: a randomized clinical trial. *JAMA*. 2014 Jul;312(2):155-61.
- [2]. Magnus CJ, et al. Ultrapotent chemogenetics for research and potential clinical applications. *Science*. 2019;364(6436):eaav5282.
- [3]. Koga M, et al. Varenicline promotes endothelial cell migration by lowering vascular endothelial-cadherin levels via the activated $\alpha 7$ nicotinic acetylcholine receptor-mitogen activated protein kinase axis. *Toxicology*. 2017;390:1-9.
- [4]. Ren J, et al. Countering Opioid-induced Respiratory Depression in Male Rats with Nicotinic Acetylcholine Receptor Partial Agonists Varenicline and ABT 594. *Anesthesiology*. 2020 May;132(5):1197-1211.
- [5]. Mello NK, et al. Effects of chronic varenicline treatment on nicotine, cocaine, and concurrent nicotine+cocaine self-administration. *Neuropsychopharmacology*. 2014 Apr;39(5):1222-31.
- [6]. Rollema H, et al. Varenicline has antidepressant-like activity in the forced swim test and augments sertraline's effect. *Eur J Pharmacol*. 2009 Mar 1;605(1-3):114-6.

Caution: Product has not been fully validated for medical applications. For research use only.

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