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- Trockeneiszuschlag
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- Expressversand

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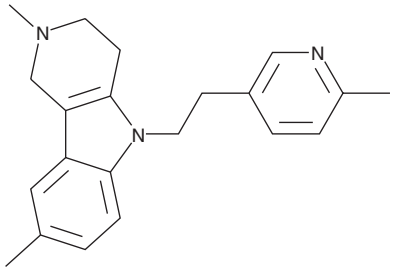
PRODUCT INFORMATION

Dimebolin

Item No. 9000556

CAS Registry No.:	3613-73-8
Formal Name:	2,3,4,5-tetrahydro-2,8-dimethyl-5-[2-(6-methyl-3-pyridinyl)ethyl]-1H-pyrido[4,3-b]indole
Synonyms:	Dimebon™, Latrepirdine
MF:	$C_{21}H_{25}N_3$
FW:	319.4
Purity:	≥98%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

Dimebolin is supplied as a crystalline solid. A stock solution may be made by dissolving the dimebolin in the solvent of choice. Dimebolin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of dimebolin in these solvents is approximately 30, 1, and 3 mg/ml, respectively.

Dimebolin is sparingly soluble in aqueous buffers. Dimebolin should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Dimebolin has a solubility of approximately 0.1 mg/ml in a 1:10 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Dimebolin is a neuroprotective agent.[1-3] It binds to histamine H_1 and H_2 receptors (IC_{50}s = 3.8 and 287 nM, respectively), as well as α_{1A}-, α_{1B}-, α_{1D}-, and α_{2A}-adrenergic receptors (ARs), imidazoline I_2 receptors, and the serotonin (5-HT) receptor subtypes 5-HT_{2A}, 5-HT_{2C}, 5-HT_6, and 5-HT_7 (K_is = 8-313 nM).[4] It also inhibits NMDA-evoked currents and voltage-gated calcium channels in mouse primary striatal neurons (IC_{50}s = 10 and 50 µM, respectively).[1] Dimebolin (50 µM) inhibits glutamate-induced apoptosis in primary striatal neurons derived from the YAC128 transgenic mouse model of Huntington's disease. It inhibits cell death induced by amyloid-β (25-35) (Item No. 24155) in cerebellar granule cells when used at a concentration of 25 µM.[2] Dimebolin (1 mg/kg) inhibits decreases in two-way active avoidance reaction (TWAA) acquisition in a rat model of Alzheimer's disease induced by 1-ethyl-1-(2-hydroxyethyl) aziridinium (AF64A).[3]

References

1. Wu, J., Li, Q., and Bezprozvanny, I. Evaluation of dimebon in cellular model of Huntington's disease. *Mol. Neurodegener.* **3**, 15 (2008).
2. Lermontova, N.N., Redkozubov, A.E., Shevtsova, E.F., *et al.* Dimebon and tacrine inhibit neurotoxic action of β-amyloid in culture and block L-type Ca^{2+} channels. *B. Exp. Biol. Med.* **132(5)**, 1079-1083 (2001).
3. Lermontova, N.N., Lukoyanov, N.V., Serkova, T.P., *et al.* Dimebon improves learning in animals with experimental Alzheimer's disease. *B. Exp. Biol. Med.* **129(6)**, 640-642 (2000).
4. Okun, I., Tkachenko, S.E., Khvat, A., *et al.* From anti-allergic to anti-Alzheimer's: Molecular pharmacology of Dimebon™. *Curr. Alzheimer Res.* **7(2)**, 97-115 (2010).

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