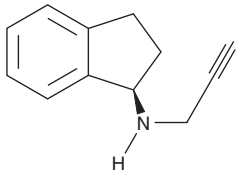
PRODUCT INFORMATION

Rasagiline

Item No. 14917

CAS Registry No.:	136236-51-6
Formal Name:	(1R)-2,3-dihydro-N-2-propyn-1-yl-1H-inden-1-amine
Synonyms:	(R)-(+)-Rasagiline
MF:	$C_{12}H_{13}N$
FW:	171.2
Purity:	≥95%
UV/Vis.:	λ_{max}: 265, 272 nm
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

Rasagiline is supplied as a solid. A stock solution may be made by dissolving the rasagiline in the solvent of choice. Rasagiline is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of rasagiline in ethanol and DMSO is approximately 10 mg/ml and approximately 3 mg/ml in DMF.

Rasagiline is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, rasagiline should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Rasagiline has a solubility of approximately 0.10 mg/ml in a 1:9 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Rasagiline is an inhibitor of monoamine oxidase B (MAO-B; IC_{50} = 4.43 nM for rat brain enzyme).[1] It is selective for MAO-B over MAO-A (IC_{50} = 412 nM for rat brain enzyme). It inhibits serum and NGF withdrawal-induced apoptosis of PC12 cells when used at concentrations ranging from 0.01 to 100 µM.[2] Rasagiline inhibits rat brain MAO-B *in vivo* (ED_{50} = 0.1 mg/kg).[1] It reduces cerebral edema in a mouse model of traumatic brain injury.[2] Rasagiline (0.1 mg/kg) reduces cortical and hippocampal levels of full-length and soluble amyloid precursor protein (APP) in rats and mice. It also reduces α-synuclein-induced substantia nigral neuron loss and improves motor dysfunction in a mouse model of Parkinson's disease.[3] Formulations containing rasagiline have been used in the treatment of Parkinson's disease.

References

1. Youdim, M.B.H., Gross, A., and Finberg, J.P. Rasagiline [N-propargyl-1R(+)-aminoindan], a selective and potent inhibitor of mitochondrial monoamine oxidase B. *Br. J. Pharmacol.* **132(2)**, 500-506 (2001).
2. Youdim, M.B.H. and Weinstock, M. Molecular basis of neuroprotective activities of rasagiline and the anti-Alzheimer drug TV3326 [(*N*-propargyl-(3*R*) aminoindan-5-YL)-ethyl methyl carbamate]. *Cell. Mol. Neurobiol.* **21(6)**, 555-573 (2001).
3. Kang, S.S., Ahn, E.H., Zhang, Z., *et al.* α-Synuclein stimulation of monoamine oxidase-B and legumain protease mediates the pathology of Parkinson's disease. *EMBO J.* **37(12)**, e98878 (2018).

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