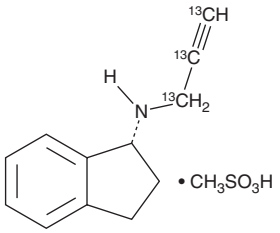
PRODUCT INFORMATION

Rasagiline-$^{13}C_3$ (mesylate)

Item No. 31688

CAS Registry No.: 1391052-18-8
Formal Name: (R)-N-(prop-2-yn-1-yl-$^{13}C_3$)-2,3-dihydro-1H-inden-1-amine, monomethanesulfonate
MF: $C_9[^{13}C]_3H_{13}N \bullet CH_3SO_3H$
FW: 270.3
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

Rasagiline-$^{13}C_3$ (mesylate) is supplied as a solid. A stock solution may be made by dissolving the rasagiline-$^{13}C_3$ (mesylate) in the solvent of choice, which should be purged with an inert gas. Rasagiline-$^{13}C_3$ (mesylate) is slightly soluble in DMSO and methanol.

Description

Rasagiline-$^{13}C_3$ is intended for use as an internal standard for the quantification of rasagiline (Item No. 14917) by GC- or LC-MS. Rasagiline is an inhibitor of monoamine oxidase B (MAO-B; IC_{50} = 4.43 nM for the rat brain enzyme).[1] It is selective for MAO-B over MAO-A (IC_{50} = 412 nM for the 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. *Brit. 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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