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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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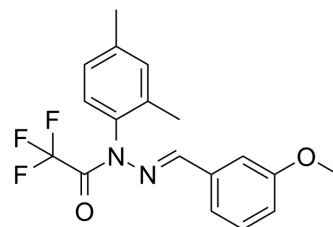
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(E/Z)-J147

Cat. No.:	HY-13779
CAS No.:	1146963-51-0
Molecular Formula:	C ₁₈ H ₁₇ F ₃ N ₂ O ₂
Molecular Weight:	350.34
Target:	Monoamine Oxidase; Dopamine Transporter
Pathway:	Neuronal Signaling
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (285.44 mM)
 * "≥" means soluble, but saturation unknown.

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		2.8544 mL	14.2718 mL	28.5437 mL
	5 mM		0.5709 mL	2.8544 mL	5.7087 mL
	10 mM		0.2854 mL	1.4272 mL	2.8544 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
 Solubility: ≥ 1.88 mg/mL (5.37 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
 Solubility: 1.88 mg/mL (5.37 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

(E/Z)-J147 is an exceptionally potent, orally active, neuroprotective agent for cognitive enhancement. (E/Z)-J147 can readily pass the blood brain barrier (BBB). (E/Z)-J147 can inhibit monoamine oxidase B (MAO B) and the dopamine transporter with EC₅₀ values of 1.88 μM and 0.649 μM, respectively. (E/Z)-J147 has potential for the treatment of Alzheimer's disease (AD)^{[1][2][3]}.

IC₅₀ & Target

MAO B; Dopamine transporter^[2]

In Vitro

(E/Z)-J147 promotes HT22 and primary cell survival in a dose-dependent manner (EC₅₀ value range of 0.06-0.115 μM)^[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

(E/Z)-J147 (diet is prepared by the addition of (E/Z)-J147 at 200ppm; 6 months) enhances memory and dendritic spine number in old mice^[4].

The half life ($t_{1/2}$) of (E/Z)-J147 is calculated at 1.5 hrs in plasma and 2.5 hrs in brain (per oral (PO) administration at a single dose of 20 mg/kg)^[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	24 male C57Bl/6 mice aged 24 months; using 8 month-old mice as controls ^[4]
Dosage:	200 ppm
Administration:	The diet was prepared by the addition of 200ppm; 6 months
Result:	While both young and old animals recognized when an object was moved a large distance (135 degrees), a reduction in the recognition index (RI) in aged mice was observed when the object was moved a smaller distance of 45 degrees. The reduction in the RI was reversed upon treatment with (E/Z)-J147.

REFERENCES

[1]. Wang M, et al. The first synthesis of [11C]J147, a new potential PET agent for imaging of Alzheimer's disease. Bioorg Med Chem Lett. 2013 Jan 15;23(2):524-7.

[2]. Chen Q, et al. A novel neurotrophic drug for cognitive enhancement and Alzheimer's disease. PLoS One. 2011;6(12):e27865.

[3]. Prior M, et al. Selecting for neurogenic potential as an alternative for Alzheimer's disease drug discovery. Alzheimers Dement. 2016 Jun;12(6):678-86.

[4]. Prior M, et al. The neurotrophic compound J147 reverses cognitive impairment in aged Alzheimer's disease mice. Alzheimers Res Ther. 2013 May 14;5(3):25.

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

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