Inhibitors



Product Data Sheet

Istradefylline-¹³C,d₃

 Cat. No.:
 HY-10888S

 CAS No.:
 2749234-46-4

 Molecular Formula:
 C₁₉13CH₂₁D₃N₄O₄

Molecular Weight: 388.44

Target: Adenosine Receptor; Isotope-Labeled Compounds

Pathway: GPCR/G Protein; Others

Storage: Please store the product under the recommended conditions in the Certificate of

Analysis.

BIOLOGICAL ACTIVITY

Description	Istradefylline- 13 C, d ₃ is the 13 C- and deuterium labeled Istradefylline. Istradefylline is a very potent, selective and orally active adenosine A2A receptor antagonist with Ki of 2.2 nM in experimental models of Parkinson's disease.
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs ^[86] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

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- [2]. Chen JF, et al. Neuroprotection by caffeine and A(2A) adenosine receptor inactivation in a model of Parkinson's disease. J Neurosci. 2001 May 15;21(10):RC143.
- [3]. Kanda T, et al. Combined use of the adenosine A(2A) antagonist KW-6002 with L-DOPA or with selective D1 or D2 dopamine agonists increases antiparkinsonian activity but not dyskinesia in MPTP-treated monkeys. Exp Neurol. 2000 Apr;162(2):321-7.
- [4]. Mihara T, et al. Pharmacological characterization of a novel, potent adenosine A1 and A2A receptor dual antagonist, 5-[5-amino-3-(4-fluorophenyl)pyrazin-2-yl]-1-isopropylpyridine-2(1H)-one (ASP5854), in models of Parkinson's disease and cognition. J Pharm
- [5]. Shiozaki S, et al. Actions of adenosine A2A receptor antagonist KW-6002 on drug-induced catalepsy and hypokinesia caused by reserpine or MPTP. Psychopharmacology (Berl). 1999 Nov;147(1):90-5.
- [6]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-223.

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

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