

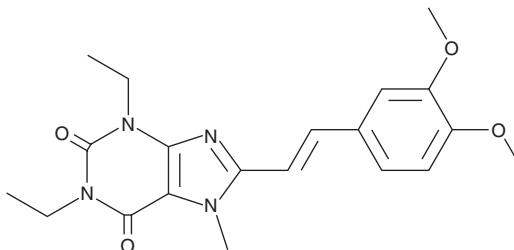
PRODUCT INFORMATION



Istradefylline

Item No. 22958

CAS Registry No.: 155270-99-8
Formal Name: 8-[(1E)-2-(3,4-dimethoxyphenyl)ethenyl]-1,3-diethyl-3,7-dihydro-7-methyl-1H-purine-2,6-dione
Synonym: KW 6002
MF: C₂₀H₂₄N₄O₄
FW: 384.4
Purity: ≥98%
UV/Vis.: λ_{max}: 228, 363 nm
Supplied as: A crystalline 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

Istradefylline is supplied as a crystalline solid. A stock solution may be made by dissolving the istradefylline in the solvent of choice, which should be purged with an inert gas. Istradefylline is soluble in the organic solvent acetonitrile at a concentration of approximately 1 mg/ml.

Description

Istradefylline is an adenosine receptor 2A (A_{2A}) antagonist (K_i = 2.2 nM in a radioligand binding assay).¹ *In vivo*, istradefylline inhibits catalepsy induced by haloperidol (Item No. 12014) with an ED₅₀ value of 0.23 mg/kg in rats. Oral administration of istradefylline alleviates postural defects in a dose-dependent manner without inducing dyskinesias or hyperactivity in an MPTP-induced marmoset model of Parkinson's disease.² It also decreases bradykinesias induced by L-DOPA (Item No. 13248) and improves attentional and working memory deficits in an MPTP-induced macaque model of Parkinson's disease.³ Formulations containing istradefylline are used to extend on-time in Parkinson's disease patients experiencing motor fluctuations.

References

1. Shimada, J., Nobuaki, K., Nonaka, H., *et al.* Adenosine A_{2A} antagonists with potent anti-cataleptic activity *Bioorg. Med. Chem. Lett.* **7(18)**, 2349-2352 (1997).
2. Kanda, T., Jackson, M.J., Smith, L.A., *et al.* Adenosine A_{2A} antagonist: A novel antiparkinsonian agent that does not provoke dyskinesia in parkinsonian monkeys. *Ann Neurol.* **43(4)**, 507-513 (1998).
3. Ko, W.K.D., Camus, S.M., Li, Q., *et al.* An evaluation of istradefylline treatment on Parkinsonian motor and cognitive deficits in 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP)-treated macaque models. *Neuropharmacology* **100(Pt. A)**, 48-58 (2016).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/25/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM