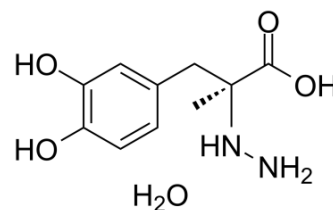


Carbidopa monohydrate

Cat. No.:	HY-B0311A
CAS No.:	38821-49-7
Molecular Formula:	C ₁₀ H ₁₆ N ₂ O ₅
Molecular Weight:	244.24
Target:	Aryl Hydrocarbon Receptor
Pathway:	Immunology/Inflammation
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Carbidopa ((S)-(-)-Carbidopa) monohydrate, a peripheral decarboxylase inhibitor, can be used for the research of Parkinson's disease. Carbidopa monohydrate is a selective aryl hydrocarbon receptor (AhR) modulator. Carbidopa monohydrate inhibits pancreatic cancer cell and tumor growth ^{[1][2]} .
In Vitro	Carbidopa ((S)-(-)-Carbidopa) monohydrate exhibits activities similar to that described for other AhR ligands in BxPC3 and Capan-2 cells, namely the induction of CYP1A1 and CYP1A2, which are inhibited by AhR antagonists such as CH223191 ^[1] . Carbidopa, an aromatic-L-amino acid decarboxylase inhibitor, is selectively cytotoxic to human pulmonary carcinoid and small cell lung carcinoma cells. Carbidopa is lethal (IC ₅₀ =29 μM) ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Carbidopa monohydrate also induces nuclear uptake of the AhR, and in vivo studies show that carbidopa at a dose of 1 mg/mouse significantly inhibits tumor growth in athymic nude mice bearing BxPC3 cells as xenografts ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Safe S. Carbidopa: a selective Ah receptor modulator (SAhRM). *Biochem J.* 2017;474(22):3763-3765. Published 2017 Nov 6.
- [2]. Fermaglich J. Treatment of Parkinson's disease with carbidopa, a peripheral decarboxylase inhibitor, and levodopa. *Med Ann Dist Columbia.* 1974;43(12):587-591.
- [3]. Gilbert JA, et al. The aromatic-L-amino acid decarboxylase inhibitor carbidopa is selectively cytotoxic to human pulmonary carcinoid and small cell lung carcinoma cells. *Clin Cancer Res.* 2000;6(11):4365-4372.

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

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