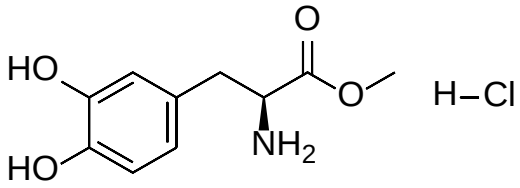
Product data sheet

MedKoo Cat#: 592456 Name: Melevodopa hydrochloride CAS: 1421-65-4 Chemical Formula: $C_{10}H_{14}ClNO_4$ Exact Mass: 247.0611 Molecular Weight: 247.675	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:
Melevodopa hydrochloride is a biochemical.

2. CoA, QC data, SDS, and handling instruction
SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMF	30.0	121.13
DMSO	20.0	80.75
Ethanol	25.0	100.94
PBS (pH 7.2)	10.0	40.38

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	**1 mg**	**5 mg**	**10 mg**
1 mM	4.04 mL	20.19 mL	40.38 mL
5 mM	0.81 mL	4.04 mL	8.08 mL
10 mM	0.40 mL	2.02 mL	4.04 mL
50 mM	0.08 mL	0.40 mL	0.81 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator
Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study
In vitro study

1. Dutta NK, Mazumdar K, Dastidar SG, Chakrabarty AN, Shirataki Y, Motohashi N. In vitro and in vivo antimycobacterial activity of an antihypertensive agent methyl-L-DOPA. In Vivo. 2005 May-Jun;19(3):539-45. Erratum in: In Vivo. 2005 Jul-Aug;19(4):813. PMID: 15875773.

2. Hu M, Borchardt RT. Mechanism of L-alpha-methyldopa transport through a monolayer of polarized human intestinal epithelial cells (Caco-2). Pharm Res. 1990 Dec;7(12):1313-9. doi: 10.1023/a:1015906409585. PMID: 2095572.

In vivo study

1. Li R, Liang T, Chen Z, Zhang S, Lin X, Huang R. L-dopa methyl ester attenuates amblyopia-induced neuronal injury in visual cortex of amblyopic cat. Gene. 2013 Sep 15;527(1):115-22. doi: 10.1016/j.gene.2013.05.072. Epub 2013 Jun 14. Erratum in: Gene. 2021 Apr 20;777:145477. PMID: 23774688.

2. Ren T, Yang X, Wu N, Cai Y, Liu Z, Yuan W. Sustained-release formulation of levodopa methyl ester/benserazide for prolonged suppressing dyskinesia expression in 6-OHDA-leisoned rats. Neurosci Lett. 2011 Sep 15;502(2):117-22. doi: 10.1016/j.neulet.2011.07.042. Epub 2011 Aug 4. PMID: 21835223.

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7. Bioactivity

Biological target:

Melevodopa hydrochloride is an Anti-Dyskinesia Agent.

In vitro activity

Methyl-L-DOPA, an antihypertensive agent, has significant in vitro activity against a variety of atypical mycobacteria such as the Mycobacterium avium complex, M. scrofulaceum, M. xenopi and M. marinum, and rare pathogens like M. fortuitum. In the present investigation, the screening of the in vitro activity was further extended by testing the in vitro activity against a total of 53 different strains of mycobacteria, including 34 clinical isolates of both drug-sensitive and drug-resistant Mycobacterium tuberculosis. Most of the strains were inhibited at 10-25 microg/mL concentrations of the drug.

Reference: In Vivo. 2005 May-Jun;19(3):539-45. https://pubmed.ncbi.nlm.nih.gov/15875773/

In vivo activity

The present study aimed to assess the potential anti-amblyopic effects of L-dopa methyl ester (LDME) on visual cortex area 17 in an amblyopic feline model induced by monocular vision deprivation. These findings suggested that LDME treatment could effectively increase DA and its metabolite contents, and restrain the apoptotic process, as well as elevate the c-fos expression in nerve cells of visual cortex area 17. Taken together, LDME might ameliorate the functional cytoarchitecture in visual cortex area 17 through mechanisms that elevate DA content and increase endogenous c-fos expression, as well as inhibit neuronal lesion in visual cortex tissue.

Reference: Gene. 2013 Sep 15;527(1):115-22. https://pubmed.ncbi.nlm.nih.gov/23774688/

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.