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- Trockeneiszuschlag
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- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

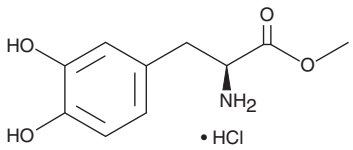
linkedin.com/company/szaboscandic

PRODUCT INFORMATION

L-DOPA methyl ester (hydrochloride)

Item No. 16149

CAS Registry No.:	1421-65-4
Formal Name:	3-hydroxy-L-tyrosine, methyl ester, monohydrochloride
Synonyms:	3,4-Dihydroxyphenylalanine methyl ester, LDME, Levodopa methyl ester, ST 41769
MF:	$C_{10}H_{13}NO_4 \bullet HCl$
FW:	247.7
Purity:	≥98%
UV/Vis.:	λ_{max}: 284 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

LDME (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the LDME (hydrochloride) in the solvent of choice. LDME (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of LDME (hydrochloride) in these solvents is approximately 25, 20, and 30 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of LDME (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of LDME (hydrochloride) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

L-DOPA (Item No. 13248) is a metabolic precursor of dopamine that is capable of crossing the blood brain barrier to act as a dopamine D1 receptor agonist. It is produced from L-tyrosine by trysosine hydroxylase. In the brain, L-DOPA is converted to dopamine by the enzyme aromatic L-amino acid decarboxylase. It is conventionally used to increase dopamine concentrations in the brain as a treatment for Parkinson's disease and stroke recovery.[1] LDME is a neutral derivative of L-DOPA formulated for increased solubility compared to the parent compound.[2]

References

1. Berends, H.I., Nijlant, J.M.M., Movig, K.L.L., *et al*. The clinical use of drugs influencing neurotransmitters in the brain to promote motor recovery after stroke; a Cochrane systematic review. *Eur. J. Phys. Rehabil. Med.* **45(4)**, 621-630 (2009).
2. Kleedorfer, B., Lees, A.J., and Stern, G.M. Subcutaneous and sublingual levodopa methyl ester in Parkinson's disease. *J. Neurol. Neurosurg. Psychiatry* **54(4)**, 373 (1991).

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