

PRODUCT INFORMATION



MCU i4

Item No. 39993

CAS Registry No.: 371924-24-2

Formal Name: 4-[[4-(diethylamino)phenyl]amino]-6-methyl-3-quinolinecarboxylic acid, ethyl ester

Synonym: Mitochondrial Calcium Uptake Inhibitor 4

MF: $C_{23}H_{27}N_3O_2$

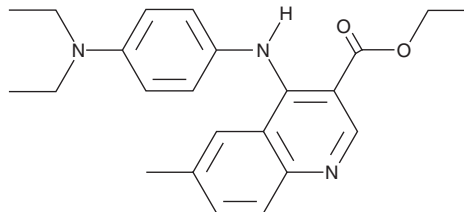
FW: 377.5

Purity: $\geq 98\%$

Supplied as: A 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

MCU i4 is supplied as a solid. A stock solution may be made by dissolving the MCU i4 in the solvent of choice, which should be purged with an inert gas. MCU i4 is soluble in methanol and acetonitrile.

Description

MCU i4 is a negative modulator of mitochondrial calcium uptake.¹ It selectively decreases mitochondrial over cytosolic histamine-induced calcium uptake, but also decreases the mitochondrial membrane potential, in HeLa cells when used at a concentration of 10 μM . MCU i4 binds to mitochondrial calcium uptake protein 1 (Mcu1), a regulatory protein of the mitochondrial calcium uniporter (MCU) complex, in a cell-free assay ($K_d = 8.4 \mu\text{M}$ for the mouse protein). It decreases myotube width in differentiated C2C12 skeletal muscle myoblasts in an *in vitro* model of myotube growth. MCU i4 (2.5 μM) protects against ferroptosis induced by RSL3, erastin (Item No. 17754), or glutamate in HT22 hippocampal cells.²

References

1. Di Marco, G., Vallese, F., Jourde, B., *et al.* A high-throughput screening identifies MICU1 targeting compounds. *Cell Rep.* **30**(7), 2321-2331 (2020).
2. Marmolejo-Garza, A., Krabbendam, I.E., Luu, M.D.A., *et al.* Negative modulation of mitochondrial calcium uniporter complex protects neurons against ferroptosis. *Cell Death Dis.* **14**(11), 772 (2023).

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.

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