

PRODUCT INFORMATION



MC1

Item No. 46326

Formal Name: 3-(3,4-dihydroxyphenyl)-N-(2-(5-methoxy-1H-indol-3-yl)ethyl)propanamide

MF: C₂₀H₂₂N₂O₄

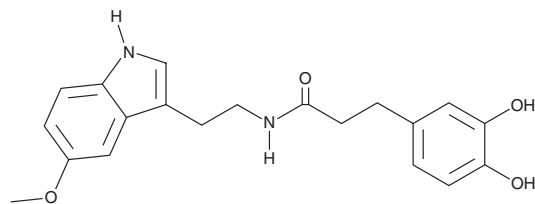
FW: 354.4

Purity: ≥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

MC1 is supplied as a solid. A stock solution may be made by dissolving the MC1 in the solvent of choice, which should be purged with an inert gas. MC1 is soluble (≥10 mg/ml) in ethanol and DMSO.

Description

MC1 is an antioxidant, a mitochondrial dynamics regulator, and a conjugate of melatonin (Item No. 14427) and catechol (Item No. 34791).¹ It selectively scavenges peroxy over hydroxyl radicals (IC₅₀s = 0.0376 and 16.3 μM, respectively) and inhibits ferroptosis induced by erastin (Item No. 17754) or RSL3 (Item No. 19288) in PC12 cells; however, although it decreases total cellular reactive oxygen species (ROS), it also increases mitochondrial superoxide and hydrogen peroxide levels. MC1 elongates mitochondria, indicating mitochondrial fusion, reverses doxorubicin-induced decreases in mitochondrial membrane potential, and increases ATP production in PC12 cells. It decreases lipofuscin levels and lipid deposits, markers of aging, and increases lifespan in *C. elegans* at 50 μM.

Reference

1. Qian, C., Zhang, Y., Dang, X., *et al.* A melatonin-catechol hybrid molecule prolongs lifespan via regulating ROS and reprogramming mitochondrial metabolism. *J. Med. Chem.* (2026).

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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