

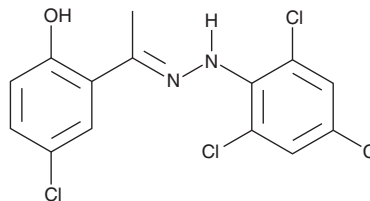
PRODUCT INFORMATION



Mitochondrial Fusion Promoter M1

Item No. 39909

CAS Registry No.: 219315-22-7
Formal Name: 2-(2,4,6-trichlorophenyl)hydrazone,
1-(5-chloro-2-hydroxyphenyl)-ethanone
Synonyms: M1
MF: C₁₄H₁₀Cl₄N₂O
FW: 364.1
Purity: ≥95%
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

Mitochondrial fusion promoter M1 is supplied as a solid. A stock solution may be made by dissolving the mitochondrial fusion promoter M1 in the solvent of choice, which should be purged with an inert gas. Mitochondrial fusion promoter M1 is soluble in methanol and DMSO.

Description

Mitochondrial fusion promoter M1 is a promoter of mitochondrial fusion.¹ It induces elongation of mitochondria in mitofusin-1 knockout (*Mfn1*^{-/-}) or *Mfn2*^{-/-} mouse embryonic fibroblasts (MEFs; EC₅₀s = 5.3 and 4.42 μM, respectively) and protects against MPP⁺-induced mitochondrial fragmentation and cytotoxicity in SH-SY5Y cells when used at a concentration of 5 μM. M1 (1 μM) reduces apoptosis and inhibits decreases in testosterone levels induced by the organophosphate triphenyl phosphite in TM3 mouse Leydig cells.² *In vivo*, mitochondrial fusion promoter M1 (2 mg/kg) improves novel object recognition deficits induced by the antitumor antibiotic doxorubicin (Item No. 15007) in rats.³

References

1. Wang, D., Wang, J., Bonamy, G.M.C., *et al.* A small molecule promotes mitochondrial fusion in mammalian cells. *Angew Chem. Int. Ed. Engl.* **51**(37), 9302-9305 (2012).
2. Wang, M., Xu, J., Zhao, Z., *et al.* Triphenyl phosphite induced apoptosis of mice testicular Leydig cells and TM3 cells through ROS-mediated mitochondrial fusion inhibition. *Ecotoxicol. Environ. Saf.* **256**, 114876 (2023).
3. Ongnok, B., Maneechote, C., Chunchai, T., *et al.* Modulation of mitochondrial dynamics rescues cognitive function in rats with 'doxorubicin-induced chemobrain' via mitigation of mitochondrial dysfunction and neuroinflammation. *FEBS J.* **289**(20), 6435-6455 (2022).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 02/13/2024

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