

PRODUCT INFORMATION



FCCP

Item No. 15218

CAS Registry No.: 370-86-5

Formal Name: 2-[2-[4-(trifluoromethoxy)phenyl]hydrazinylidene]-propanedinitrile

Synonym: Trifluoromethoxy carbonylcyanide phenylhydrazone

MF: C₁₀H₅F₃N₄O

FW: 254.2

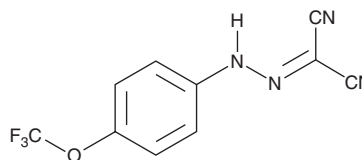
Purity: ≥98%

UV/Vis.: λ_{max}: 240, 356 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

FCCP is supplied as a crystalline solid. A stock solution may be made by dissolving the FCCP in the solvent of choice. FCCP is soluble in DMSO at a concentration of approximately 25 mg/ml.

Description

FCCP is a potent uncoupler of oxidative phosphorylation in mitochondria that disrupts ATP synthesis by transporting protons across cell membranes.^{1,2} At 40 μM, FCCP induces complete depolymerization of microtubules by increasing intracellular pH via the disruption of mitochondrial H⁺ gradient and by decreasing the stability of the microtubules by impairing the binding of microtubule-associated proteins.³

References

1. Parker, V.H. Uncouplers of rat-liver mitochondrial oxidative phosphorylation. *Biochem. J.* **97(3)**, 658-662 (1965).
2. Benz, R. and McLaughlin, S. The molecular mechanism of action of the proton ionophore FCCP (carbonylcyanide *p*-trifluoromethoxyphenylhydrazone). *Biophys. J.* **41(3)**, 381-398 (1983).
3. Maro, B., Marty, M.C., and Bornens, M. *In vivo* and *in vitro* effects of the mitochondrial uncoupler FCCP on microtubules. *EMBO J.* **1(11)**, 1347-1352 (1982).

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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