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DATASHEET

FCCF

Product overview

 Name
 FCCP

 Cat No
 HB2903

Alternative names Carbonyl cyanide 4-(trifluoromethoxy)phenylhydrazone

Purity >98%

Description Potent uncoupler of mitochondrial oxidative phosphorylation.

Biological Data

Biological description FCCP is an protonophore which is widely used to investigate the role of mitochondria in cellular

function.

FCCP is a potent uncoupler of mitochondrial oxidative phosphorylation. FCCP disrupts ATP synthesis by transporting protons across the mitochondrial inner membrane, interfering with the proton gradient.

FCCP also induces apoptosis.

The uncoupling agent CCCP is also available.

Solubility & Handling

Solubility overview Soluble in DMSO (100 mM) **Storage instructions** Room temperature

Storage of solutions Prepare and use solutions on the same day if possible. Store solutions at -20 °C for up to one month if

storage is required. Equilibrate to RT and ensure the solution is precipitate free before use.

Shipping Conditions Stable for ambient temperature shipping. Follow storage instructions on receipt.

Important This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not

for human or veterinary use

Chemical Data

Chemical name Carbonyl cyanide 4-(trifluoromethoxy)phenylhydrazone

Molecular Weight 254.17

Molecular Formula $C_{10}H_5F_3N_4O$ CAS Number370-86-5PubChem identifier3330

SMILES C1=CC(=CC=C1NN=C(C#N)C#N)OC(F)(F)F

Source Synthetic

InChi InChi InChi-1S/C10H5F3N4O/c11-10(12,13)18-9-3-1-7(2-4-9)16-17-8(5-14)6-15/h1-4,16H

InChiKey BMZRVOVNUMQTIN-UHFFFAOYSA-N

MDL number MFCD00009699
Appearance Yellow solid

References

Mitochondrial uncoupler FCCP activates proton conductance but does not block store-operated Ca(2+) current in liver cells.

MS et al (2010) Arch Biochem Biophys 495(2) **PubMedID** 20060804

FCCP depolarizes plasma membrane potential by activating proton and Na+ currents in bovine aortic endothelial cells.

Park et al (2002) Pflugers Arch 443(3)

PubMedID 11810202

Mitochondrial uncoupling, with low concentration FCCP, induces ROS-dependent cardioprotection independent of KATP channel activation.

Brennan et al (2006) Cardiovasc Res. 72(2) **PubMedID**16950237