

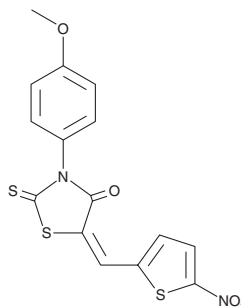
PRODUCT INFORMATION



CCF-642

Item No. 27054

CAS Registry No.: 346640-08-2
Formal Name: 3-(4-methoxyphenyl)-5-[(5-nitro-2-thienyl)methylene]-2-thioxo-4-thiazolidinone
MF: C₁₅H₁₀N₂O₄S₃
FW: 378.4
Purity: ≥98% (mixture of isomers)
UV/Vis.: λ_{max}: 226, 308, 411, 673 nm
Supplied as: A crystalline 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

CCF-642 is supplied as a crystalline solid. A stock solution may be made by dissolving the CCF-642 in the solvent of choice, which should be purged with an inert gas. CCF-642 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of CCF-642 in these solvents is approximately 0.25, 5, and 10 mg/ml, respectively.

Description

CCF-642 is an inhibitor of protein disulfide isomerase (PDI).¹ It inhibits the reducing capacity of PDI when used at a concentration of 1 μM. It inhibits proliferation in ten multiple myeloma cell lines with IC₅₀ values of less than 1 μM. It is cytotoxic to primary cells isolated from patients with refractory myeloma who developed secondary plasma cell leukemia (IC₅₀ = <1 μM) but not to normal bone marrow mononuclear (NLBM) cells up to a concentration of 6.75 μM. CCF-642 (3 μM) also induces acute endoplasmic reticulum (ER) stress, increasing ERK phosphorylation and dimerization of IRE1-α, indicating an increase in the amount of misfolded ER proteins. It increases calcium accumulation and cleaved caspase-3 in MM1.S cells and induces apoptosis. CCF-642 increases survival in a 5TGM1 mouse syngeneic model of myeloma when administered at a dose of 10 mg/kg three times per week.

Reference

1. Vatolin, S., Phillips, J.G., Jha, B.K., *et al.* Novel protein disulfide isomerase inhibitor with anticancer activity in multiple myeloma. *Cancer Res.* **76(11)**, 3340-3350 (2016).

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

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