

Product Data Sheet

Product Name: LCS3
Cat. No.: GC49753

Chemical Properties

Cas. No. 109844-92-0

SMILES O=C(NC1=CC=C(Cl)C=C1)C=2OC(=CC2)N(=O)=O

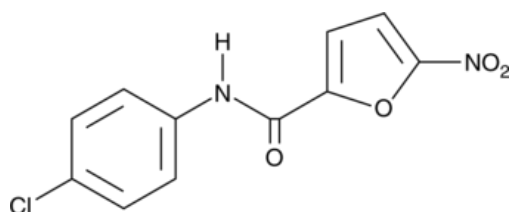
Formula C₁₁H₇ClN₂O₄ M.Wt 266.6

Solubility DMF: slightly, DMSO: 1 mg/ml, Ethanol: insol, PBS (pH 7.2): insol
Storage -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available sizes: ship with RT, or blue ice upon request.

Structure



Background

LCS3 is an inhibitor of glutathione reductase (GR) and thioredoxin reductase (TrxR; IC₅₀s = 3.3 and 3.8 μM, respectively).¹ It decreases the glutathione (GSH) to oxidized GSH (GSSG) ratio in NCI H1650 and H23 lung adenocarcinoma cells in a concentration-dependent manner. LCS3 (3 μM) induces apoptosis in NCI H1650 and H23 cells but not non-transformed HPL1D lung epithelial cells. It is also active against *M. tuberculosis* (MIC = 0.098 μM).²

1. Johnson, F.D., Ferrarone, J., Liu, A., et al. Characterization of a small molecule inhibitor of disulfide reductases that induces oxidative stress and lethality in lung cancer cells. *Cell Rep.* 38(6):110343 (2022)

2. Gallardo-Marcias, R., Kumar, P., Jaskowski, M., et al. Optimization of N-benzyl-5-nitrofuran-2-carboxamide as an antitubercular agent. *Bioorg. Med. Chem. Lett.* 29(4):601-606 (2019)

Caution: Product has not been fully validated for medical applications. For research use only.

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