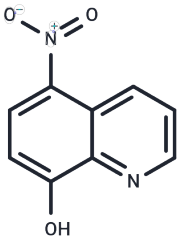
Data Sheet (Cat.No.T0400)

TargetMol

Nitroxoline

Chemical Properties



CAS No. : 4008-48-4

Formula: C9H6N2O3

Molecular Weight: 190.16

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Nitroxoline (5-nitroquinolin-8-ol) is a urinary antibacterial agent active against susceptible gram-positive and gram-negative organisms commonly found in urinary tract infections.
Targets(IC50)	Antibacterial,Antibiotic,Autophagy
In vitro	Nitroxoline significantly reduces extracellular DQ-collagen IV degradation by all evaluated cancer cell lines using spectrofluorimetry. Nitroxoline also markedly decreases tumor cell invasion monitored in real time and reduces the invasive growth of multicellular tumor spheroids, used as a 3D in vitromodel of tumor invasion. Endothelial tube formation is significantly reduced by nitroxoline in an in vitro angiogenesis assay [1].
In vivo	Nitroxoline significantly abrogates tumor growth, angiogenesis and metastasis in vivo in LPB fibrosarcoma and MMTV-PyMT breast cancer mouse models[1].
Kinase Assay	In Vitro Kinase Assays : The potency of SP600125 towards kinases, including MPS1, JNK, and Aurora kinase A, is determined based on the specific measurement of radioactive phosphotransfer to the substrate. For each enzyme, the absolute Km values for ATP and the specific substrate are initially determined and each assay is then run at optimized [ATP] (2·αKm) and [substrate] (5·Km) concentrations. MPS1 activity is measured using 5 nM of MPS1 recombinant protein in 50 mM HEPES pH 7.5, 2.5 mM MgCl2, 1 mM MnCl2, 1 mM DTT, 3 μM NaVO3, 2 mM β-glycerophosphate, 0.2 mg/mL BSA, 200 μM P38-βtide substrate-peptide (KRQADEEMTGYVATRWYRAE), and 8 μM ATP with 1.5 nM 33P-γ-ATP. Ten serial 1:3 dilutions (from 30 μM to 1.5 nM) of SP600125 are tested and IC50 determined.
Cell Research	cell suspension are seeded in the wells of an E-plate 16 according to the manufacturer's instructions. After seeding, the CI is monitored every 15 min. After 10 h (MCF-10A neoT and MMTV-PyMT), 14 h (U-87 MG) or 24 h (LPB), when the cells are in their log phase of growth, 50 μl of the compound or 0.1% DMSO is added, and the experiment allowed to run for 72 h. Once every 24 h the medium is replaced with fresh medium containing the inhibitor or suitable control to prevent cell death due to medium depletion. Compounds and their concentrations are: nitroxoline (5 μM) and CA-074 (5 μM) for all cell lines other than MCF-10A neoT cell line, where nitroxoline was used at 2.5 μM. All measurements were performed in quadruplicate. (Only for Reference)

Solubility Information

Solubility	H2O: < 1 mg/mL (insoluble or slightly soluble), Ethanol: < 1 mg/mL (insoluble or slightly soluble), DMSO: 65 mg/mL (341.82 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.2587 mL	26.2936 mL	52.5873 mL
5 mM	1.0517 mL	5.2587 mL	10.5175 mL
10 mM	0.5259 mL	2.6294 mL	5.2587 mL
50 mM	0.1052 mL	0.5259 mL	1.0517 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Mirković B, et al. Oncotarget. 2015 Aug 7;6(22):19027-42.
Mirković B, et al. ChemMedChem. 2011, 6(8):1351-1356.