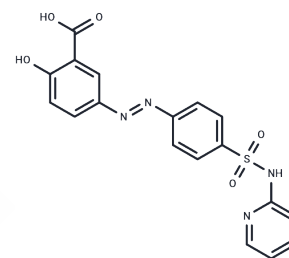


## Sulfasalazine

## Chemical Properties

CAS No. :	599-79-1
Formula:	C <sub>18</sub> H <sub>14</sub> N <sub>4</sub> O <sub>5</sub> S
Molecular Weight:	398.39
Appearance:	no data available
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year



## Biological Description

Description	Sulfasalazine (Azulfidine) is a synthetic salicylic acid derivative with affinity for elastin-containing connective tissues and formulated as a prodrug. Sulfasalazine induces iron death and inhibits NF- $\kappa$ B, TGF- $\beta$ and COX-2.
Targets(IC <sub>50</sub> )	Apoptosis, Ferroptosis, NF- $\kappa$ B, Antibacterial, Antibiotic, Autophagy, COX
In vitro	<p><b>METHODS:</b> Rat glioma cells F98 and human glioma cells U251 were treated with Sulfasalazine (200-400 <math>\mu</math>M) for 96 h. Cell viability was measured by MTT assay.</p> <p><b>RESULTS:</b> Cell viability was significantly reduced in F98 at 200-400 <math>\mu</math>M Sulfasalazine concentration and U251 showed reduced cell viability at 400 <math>\mu</math>M Sulfasalazine. [1]</p> <p><b>METHODS:</b> Mouse melanoma cells B16F10 and mouse embryonic fibroblasts MEF were treated with Sulfasalazine (10-1000 <math>\mu</math>M) for 24 h. Cellular ROS levels were measured by DCFDA staining.</p> <p><b>RESULTS:</b> At lower Sulfasalazine concentrations (10-100 <math>\mu</math>M), no increase in intracellular ROS was observed. At higher concentrations of Sulfasalazine (800-1000 <math>\mu</math>M), there was an approximately 2.3-fold increase in intracellular ROS in B16F10 cells, while no increase in ROS was observed in MEF cells. [2]</p>
In vivo	<p><b>METHODS:</b> To detect antitumor activity in vivo, Sulfasalazine (250 mg/kg) was administered intraperitoneally to C57BL/6N mice bearing B16F10 xenografts once daily for three days. Twenty-four hours after the third Sulfasalazine dose, local X-ray irradiation was applied to anesthetized tumor-bearing C57BL/6N mice at a dose of 4 Gy.</p> <p><b>RESULTS:</b> Sulfasalazine alone did not significantly inhibit tumor growth; X-ray irradiation partially reduced tumor growth; the combination of Sulfasalazine and X-rays synergistically reduced tumor growth. [2]</p>
Cell Research	Sulfasalazine is dissolved in culture medium. SW620 cells are grown in Dulbecco's modified Eagle medium, supplemented with 10% heat-inactivated FCS, 2 mmol/liter glutamine, and 1% (wt/vol) penicillin/streptomycin. SW620 cells are transfected with the 3xlgkBLuc reporter construct. After 18 h, cells are incubated with either medium alone or with sulfasalazine (0.1, 0.2, 0.5, 1, 2, 5 mM) before stimulation with TNF $\alpha$ , LPS, or PMA. Luciferase assay is performed[1].

## Solubility Information

## A DRUG SCREENING EXPERT

Solubility	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 20 mg/mL (50.2 mM),Suspension. DMSO: 200 mg/mL (502.02 mM),Sonication and heating are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5101 mL	12.5505 mL	25.101 mL
5 mM	0.502 mL	2.5101 mL	5.0202 mL
10 mM	0.251 mL	1.2551 mL	2.5101 mL
50 mM	0.0502 mL	0.251 mL	0.502 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

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