Web: www.taiclone.com
Tel: +886-2-2735-9682
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Sulfanilamide

Catalog No: tcsc2221

Available Sizes

Size: 500g

Size: 1000g

Specifications

CAS No:
63-74-1

Formula:
$C_6H_8N_2O_2S$

Pathway:
Anti-infection

Target:
Bacterial

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 30 mg/mL (174.22 mM)

Alternative Names:
Sulphanilamide

Observed Molecular Weight:
172.2

Product Description

Sulfanilamide is a competitive inhibitor for bacterial enzyme dihydropteroate synthetase with IC50 of 320 μM.

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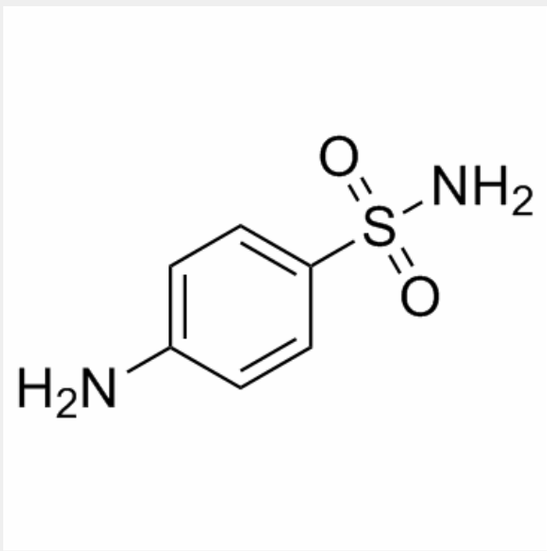
Target: dihydropteroate synthetase; Antibacterial

Sulfanilamide containing the sulfonamide functional group displays inhibitory activity for dihydropteroate synthetase partially purified from Escherichia coli which normally uses para-aminobenzoic acid (PABA) for synthesizing the necessary folic acid acting as a coenzyme in the synthesis of purine, pyrimidine and other amino acids, exhibiting an IC 50 of 320 μM for dihydropteroate synthetasea and Km of 2.5 uM for PABA [1]. Sulfanilamide shows IC50 of 286.8 μg/mL for recombinant S. cerevisiae strains with wild-type FOL1 genes, but the single mutation 55Trp to 55Ala or 57Pro to 57Ser within the putative active site of the fungal DHPS confers resistance to Sulfanilamide with IC50 of >800 μg/mL [2]. Administration of Sulfanilamide with the dosage of 100 mg/kg/day is effective in the prevention of P. carinii infection in the immunosuppressed rat model. When the dosage of sulfaguanidine and Sulfanilamide reduced to 10 mg/kg/day, breakthrough P. carinii infection occurs in the rats [3].



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