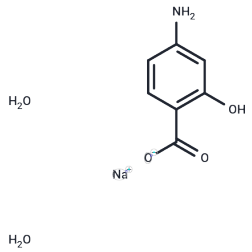
Data Sheet (Cat.No.T0020)

TargetMol

Sodium 4-aminosalicylate dihydrate

Chemical Properties



CAS No. : 6018-19-5

Formula: C7H6NNaO3·2H2O

Molecular Weight: 211.15

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Sodium 4-aminosalicylate dihydrate (4-Amino-salicylic acid sodium salt) is the sodium salt form of aminosalicylic acid, an analog of para-aminobenzoic acid (PABA) with antitubercular activity. Sodium 4-aminosalicylate dihydrate exerts its bacteriostatic activity against Mycobacterium tuberculosis by competing with PABA for enzymes involved in folate synthesis, thereby suppressing growth and reproduction of M. tuberculosis, eventually leading to cell death.
Targets(IC50)	Free radical scavengers,NF-κB,Antibacterial,Antibiotic
In vitro	Following local perfusion with 7.5 mg/mL of 4-aminosalicylate, N-acetyl-5-aminosalicylic acid was detected in the intestines of anesthetized rats.
In vivo	4-Aminosalicylate exhibits effective DPPH radical scavenging activity and rapidly neutralizes hydroperoxyl radicals in aqueous solutions, displaying a concentration-dependent cycle similar to that of Trolox or cysteine, indicative of chain-breaking antioxidant activity. At 0.65 mM, 4-aminosalicylate attenuates the lethal effects of superoxide radicals or hydrogen peroxide on Chinese hamster ovary cells. In cultured mouse peritoneal macrophages, aminosalicylate (25 mM) stimulates phospholipase D in a time- and concentration-dependent manner, and at 5 mM, it enhances protein kinase C activation of PLD. Post-treatment with 4-aminosalicylate (20 mM) results in a 260% increase in inositol 1,4,5-trisphosphate levels in macrophages. Furthermore, in isolated colonic mucosal cells, 4-aminosalicylate (0.1 mM) dose-dependently reduces the synthesis of LTB4, thereby decreasing the LTB4/PGE2 ratio.

Solubility Information

Solubility	H2O: 198.9 mM,Sonication is recommended. DMSO: 55 mg/mL (260.48 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (9.47 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.736 mL	23.6798 mL	47.3597 mL
5 mM	0.9472 mL	4.736 mL	9.4719 mL
10 mM	0.4736 mL	2.368 mL	4.736 mL
50 mM	0.0947 mL	0.4736 mL	0.9472 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Dinis TC, et al. Arch Biochem Biophys, 1994, 315(1), 161-169.