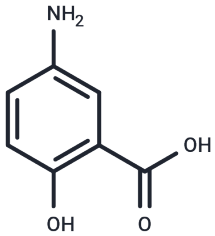
Data Sheet (Cat.No.T0646)

TargetMol

5-Aminosalicylic Acid

Chemical Properties



CAS No. : 89-57-6

Formula: C7H7NO3

Molecular Weight: 153.14

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	5-Aminosalicylic Acid (5-ASA) is a specific PPARγ agonist and also inhibits P21-activated kinase 1(PAK1) and NF-Kb. 5-Aminosalicylic Acid has anti-cancer and anti-inflammatory activities. 5-Aminosalicylic acid can inhibit the activity of osteopontin (OPN).
Targets(IC50)	NF-κB,Glutathione Peroxidase,Endogenous Metabolite,COX,Lipoxygenase,PAK,PPAR
In vitro	**METHODS**: HEK293 cells carrying the pendrin P123S mutant were treated with 5-Aminosalicylic Acid for 72 hours, and cytotoxicity was detected by the MTT method. **RESULTS**: The IC50 of 5-Aminosalicylic Acid on HEK293 cells carrying the pendrin P123S mutant was >15 mM. [1]
In vivo	**METHODS**: To study the anti-tumor activity of 5-Aminosalicylic Acid, 5-Aminosalicylic Acid (50 mM) was administered to SCID mice inoculated with HT-29 colon cancer cells for 21 consecutive days. **RESULTS**: The tumor weight and volume of SCID mice treated with 5-Aminosalicylic acid were reduced by 80-86%. [2]

Solubility Information

Solubility	Ethanol: 29 mg/mL (189.37 mM),Sonication is recommended. DMSO: 80 mg/mL (522.4 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: 3.3 mg/mL (21.55 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	6.530 mL	32.6499 mL	65.2997 mL
5 mM	1.306 mL	6.530 mL	13.0599 mL
10 mM	0.653 mL	3.265 mL	6.530 mL
50 mM	0.1306 mL	0.653 mL	1.306 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

Nabeyama W,et al. Discovery of (2-aminophenyl)methanol as a new molecular chaperone that rescues the localization of P123S mutant pendrin stably expressed in HEK293 cells. Bioorg Med Chem. 2017 May 1;25(9):2601-2608.
Xu J, Xu J, Shi T, et al. Probiotic-inspired nanomedicine restores intestinal homeostasis in colitis by regulating redox balance, immune responses, and the gut microbiome. Advanced Materials. 2022: 2207890.
Fang HM, et al. 5-aminosalicylic acid in combination with nimesulide inhibits proliferation of colon carcinoma cells in vitro. World J Gastroenterol. 2007 May 28;13(20):2872-7.
Das KK, et al. Mol Pharmacol,2009, 76(1), 183-191.
Khare V, et al. Biochem Pharmacol,2014, 87(2), 312-320.
Graham PM, et al. Mol Cell Biochem,2013, 378(1-2), 291-298.
Dammann K, et al. PAK1 modulates a PPARγ/NF-κB cascade in intestinal inflammation. Biochim Biophys Acta. 2015 Oct;1853(10 Pt A):2349-60.