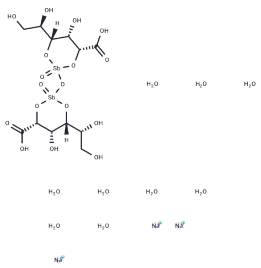
Data Sheet (Cat.No.T13013)

TargetMol

Sodium stibogluconate

Chemical Properties



CAS No. : 16037-91-5

Formula: C12H35Na3O26Sb2

Molecular Weight: 907.88

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 stibogluconate (Stibogluconate trisodium nonahydrate) is a potent inhibitor of protein tyrosine phosphatase.
Targets(IC50)	Parasite,Phosphatase
In vitro	99% of SHP-1 activity at 10 μg/mL inhibited by Sodium stibogluconate. Similar degrees of inhibition of SHP-2 and PTP1B required 100 μg/mL Sodium stibogluconate. The inhibition of cellular PTPases by the Sodium stibogluconate is suggested by its rapid induction of tyrosine phosphorylation of cellular proteins in Baf3 cells and its augmentation of IL-3-induced Janus family kinase 2/Stat5 tyrosine phosphorylation and proliferation of Baf3 cells. The augmentation of the opposite effects of GM-CSF and IFN-α on TF-1 cell growth by Sodium stibogluconate indicate its broad activities in the signaling of various cytokines[1].
In vivo	Sodium stibogluconate induces 61% growth inhibition of Renca tumors in BALB/c mice coincident with an increase (2-fold) in tumor-infiltrating macrophages. A combination of Sodium stibogluconate and IL-2 is more effective in inhibiting tumor growth (91%) and inducing tumor-infiltrating (4-fold)[2].

Solubility Information

Solubility	H2O: 55.5 mg/mL (61.13 mM),Sonication is recommended. DMSO: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.1015 mL	5.5073 mL	11.0147 mL
5 mM	0.2203 mL	1.1015 mL	2.2029 mL
10 mM	0.1101 mL	0.5507 mL	1.1015 mL
50 mM	0.022 mL	0.1101 mL	0.2203 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

Pathak MK, et al. Sodium stibogluconate is a potent inhibitor of protein tyrosine phosphatases and augments cytokine responses in hemopoietic cell lines. J Immunol. 2001 Sep 15;167(6):3391-7.
Fan K et al. Sodium Stibogluconate Interacts with IL-2 in Anti-Renca Tumor Action via a T Cell-Dependent Mechanism in Connection with Induction of Tumor-Infiltrating Macrophages. J Immunol. 2005 Nov 15;175(10): 7003-8.