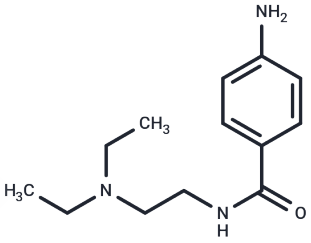
Data Sheet (Cat.No.T60322)

TargetMol

Procainamide

Chemical Properties



CAS No. :	51-06-9
Formula:	C13H21N3O
Molecular Weight:	235.33
Storage:	High Volatility Pure form: -20°C for 3 years | In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.

Biological Description

Description	Procainamide (Novocainamide) is a specific and potent DNA methyltransferase 1 (DNMT1) inhibitor and a Class 1A antiarrhythmic agent, with potential applications in cancer and arrhythmia research [1] [2].
Targets(IC50)	DNA Methyltransferase,Potassium Channel
In vitro	HCT116, HCT116 DNMT1−/−, and HCT116 DNMT3b−/− cells were treated with PBS, pH 7.4 or 0.5 mM procainamide for 96 h. Procainamide treatment of HCT116 DNMT3b−/− cells decreased m5dC content by 11.5%, but treatment of HCT116 DNMT1−/− cells did not decrease m5dC content. These results suggested that DNMT1 was the intracellular target of procainamide[1].

Solubility Information

Solubility	DMSO: 45 mg/mL (191.22 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: 1 mg/mL (4.25 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	4.2494 mL	21.2468 mL	42.4935 mL
5 mM	0.8499 mL	4.2494 mL	8.4987 mL
10 mM	0.4249 mL	2.1247 mL	4.2494 mL
50 mM	0.085 mL	0.4249 mL	0.8499 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

Lee BH, et al. Procainamide is a specific inhibitor of DNA methyltransferase 1. J Biol Chem. 2005;280(49):40749-40756.

Pritchard B, et al. Procainamide. [Updated 2021 Aug 8]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-.