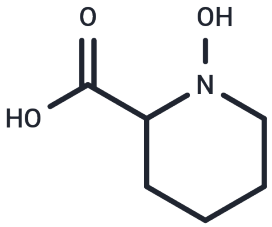
Data Sheet (Cat.No.T19458)

TargetMol

N-Hydroxypipecolic acid

Chemical Properties



CAS No. : 115819-92-6

Formula: C6H11NO3

Molecular Weight: 145.16

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	N-Hydroxypipecolic acid (NHP) is a plant metabolite and a systemic acquired resistance (SAR) regulator.
Targets(IC50)	Others,Antibacterial
In vitro	Flavin-dependent monooxygenase converts Pip to N-hydroxypipecolic acid (NHP), which functions as a critical metabolic regulator of SAR in Arabidopsis[1].

Solubility Information

Solubility	DMSO: 83.33 mg/mL (574.06 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 (22.73 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	6.889 mL	34.4448 mL	68.8895 mL
5 mM	1.3778 mL	6.889 mL	13.7779 mL
10 mM	0.6889 mL	3.4445 mL	6.889 mL
50 mM	0.1378 mL	0.6889 mL	1.3778 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

Hartmann M, et al. N-hydroxypipecolic acid and salicylic acid: a metabolic duo for systemic acquired resistance. Curr Opin Plant Biol. 2019 Aug;50:44-58.

Mahadevan N, Fernanda R, Kouzai Y, et al.Distinct Infection Mechanisms of Rhizoctonia solani AG-1 IA and AG-4 HG-I+ II in Brachypodium distachyon and Barley.Life.2025, 15(2): 235.

Ádám AL, et al. Signals of Systemic Immunity in Plants: Progress and Open Questions. Int J Mol Sci. 2018 Apr 10;19 (4). pii: E1146.

Shan L, et al. Pipped at the Post: Pipecolic Acid Derivative Identified as SAR Regulator. Cell. 2018 Apr 5;173(2):286-288.