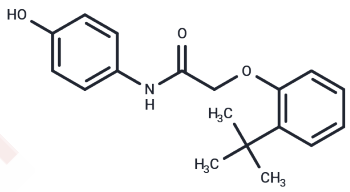
Data Sheet (Cat.No.T60667)

NAT

Chemical Properties



CAS No. : 831243-31-3

Formula: C18H21NO3

Molecular Weight: 299.36

Storage: Store at low temperature
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	NAT is a nicotinamide phosphoribosyltransferase (NAMPT) activator that increases intracellular NAD levels and induces subsequent metabolic and transcriptional reprogramming. It exhibits neuroprotective effects in a chemotherapy-induced peripheral neuropathy (CIPN) mouse model and may be employed in studies of neurodegenerative diseases or conditions associated with reduced NAD levels.
Targets(IC50)	NAMPT
In vitro	NAT (10 μM) activates NAMPT (EC50=5.7 μM) and protects U2OS cells from the toxic effects of FK866. [1]
In vivo	In a chemotherapy-induced peripheral neuropathy (CIPN) mouse model, NAT (30 mg/kg, intraperitoneal injection, once daily for 2 weeks) exerted neuroprotective effects by elevating the mechanical hyperalgesia threshold. [1]

Solubility Information

Solubility	DMSO: ≥ 80 mg/mL,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 (11.02 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	3.3405 mL	16.7023 mL	33.4046 mL
5 mM	0.6681 mL	3.3405 mL	6.6809 mL
10 mM	0.334 mL	1.6702 mL	3.3405 mL
50 mM	0.0668 mL	0.334 mL	0.6681 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

Wang L, et al. Optimization of NAMPT activators to achieve in vivo neuroprotective efficacy [published online ahead of print, 2022 Mar 16]. Eur J Med Chem. 2022;236:114260.