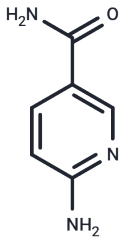
Data Sheet (Cat.No.T7545)

TargetMol

6-Aminonicotinamide

Chemical Properties



CAS No. : 329-89-5

Formula: C6H7N3O

Molecular Weight: 137.14

Storage: Keep away from direct sunlight,Store under nitrogen
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	6-Aminonicotinamide (6-AN) is a well-established inhibitor of the NADP+-dependent enzyme.
Targets(IC50)	Others,NADPH
In vitro	The EC50 of 6-AN on the inhibition of surface antigen (HBsAg) is approximately 23.89 μM in HepAD38 cells with a sensitive index (SI) > 20[1]
In vivo	6-AN decreases HBsAg production but not blocks its secretion[1].
Cell Research	The cytotoxic effects of 6-AN on various cells were assessed by (3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT) assay .?Cells were seeded into 96-well? plates and incubated with different concentrations (multiple proportion dilution from 500?μM to 0.98?μM) of 6-AN for 72 h. Next, 40?ug/ml MTT were added into cell culture media and incubated for 4 h under the condition of protection from light.?After that, dimethyl sulfoxide (DMSO) (Solarbio) was added and incubated overnight in the dark to lyses the cells and solubilize formazan dissolving in media.?Fifty-percent cytotoxicity concentrations (CC50) and Fifty-percent effective concentrations (EC50) were determined with a microplate reader and calculated via non-linear regression using GraphPad Prism 5.0[1].
Animal Research	HBV-transgenic mice (HBV-Tg C57 BL/6),Mice were selected as age (6 to 8 weeks), weight (21±1 g), and possess of basically the same serum HBsAg and HBV DNA levels.? Next, the mice were assigned to four groups of 10 individuals per group at random: negative control (0.9% saline), positive control (0.02 mg/kg Entecavir (ETV)), low concentration test group (6-AN 2.5 mg/kg), high concentration test group (6-AN 5 mg/kg).?Animals received 0.9% saline or 6-AN via intraperitoneal injection and animals received ETV via oral gavage every two days.?The serum samples were collected via orbital blood every four days after injection.?All blood was collected for analysis of serum HBsAg and HBV markers.?6 mice from each group were sacrificed by cervical dislocation at day 20 and the liver samples were used for intrahepatic HBV DNA and RNA determination.?The remaining animals were monitored without treatment up to day 32 [1].

Solubility Information

Solubility	DMSO: 90.91 mg/mL (662.9 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: 2 mg/mL (14.58 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	7.2918 mL	36.4591 mL	72.9182 mL
5 mM	1.4584 mL	7.2918 mL	14.5836 mL
10 mM	0.7292 mL	3.6459 mL	7.2918 mL
50 mM	0.1458 mL	0.7292 mL	1.4584 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

Ren F, Yang X, Hu ZW,et al.Niacin analogue, 6-Aminonicotinamide, a novel inhibitor of hepatitis B virus replication and HBsAg production[J].EBioMedicine. 2019 Nov;49:232-246.

Li M, Yang J, Ye C, et al. Integrated Metabolomics and Transcriptomics Analyses Reveal Metabolic Landscape in Neuronal Cells during JEV Infection. Virologica Sinica. 2021: 1-12.

Zhao G, Zhu H, Xue X, et al.Feline Calicivirus Infection Manipulates Central Carbon Metabolism.Veterinary Sciences. 2025, 12(2): 138.

Shawgi, Hago, Almugadam, et al. Influence of 6-aminonicotinamide (6AN) on Leishmania promastigotes evaluated by metabolomics: Beyond the pentose phosphate pathway.[J]. Chemico-biological interactions, 2018.