



SZABO SCANDIC

Part of Europa Biosite

Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!



Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

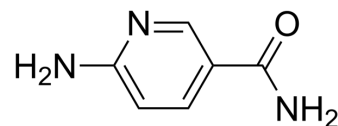
mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

6-Aminonicotinamide

Cat. No.:	HY-W010342
CAS No.:	329-89-5
Molecular Formula:	C ₆ H ₇ N ₃ O
Molecular Weight:	137.14
Target:	Others
Pathway:	Others
Storage:	4°C, protect from light * In solvent : -80°C, 2 years; -20°C, 1 year (protect from light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (729.18 mM; Need ultrasonic)				
	H ₂ O : 11.11 mg/mL (81.01 mM; Need ultrasonic)				
	Preparing Stock Solutions	Solvent Concentration Mass	1 mg	5 mg	10 mg
		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	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: PBS				
	Solubility: 4 mg/mL (29.17 mM); Clear solution; Need ultrasonic and warming and heat to 60°C				
	2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline				
	Solubility: ≥ 2.5 mg/mL (18.23 mM); Clear solution				
	3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)				
Solubility: ≥ 2.5 mg/mL (18.23 mM); Clear solution					
4. Add each solvent one by one: 10% DMSO >> 90% corn oil					
Solubility: ≥ 2.5 mg/mL (18.23 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	6-Aminonicotinamide, a potent antimetabolite of nicotinamide, is competitive NADP ⁺ -dependent enzyme glucose-6-phosphate dehydrogenase (G6PD) inhibitor (K _i =0.46 μM). 6-Aminonicotinamide results in ATP depletion and synergizes with DNA-crosslinking chemotherapy agents, such as Cisplatin, in killing cancer cells ^{[1][2][3][4]} .
In Vitro	6-Aminonicotinamide (100 nM; 7 days) causes a significant decrease in the human AR ⁺ , hormone-sensitive prostate cancer cell lines LNCaP and LAPC4, as well as the CRPC-derivative C4-2 and 22Rv1 cell models. 6-Aminonicotinamide (100 nM ± 10

	nM R1881 as indicated for 3 days) increases both basal- and R1881-mediated ROS levels, suggesting 6-Aminonicotinamide is blocking the cells' antioxidant defense. 6-Aminonicotinamide also increases ROS levels in C4-2 cells ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	6-Aminonicotinamide (20 mg/kg; i.p.; thress times; days 1, 10 or 11, and 21) alone induces a small but significant tumor growth delay (4.3+/-0.8 days). Treatment with 6-Aminonicotinamide followed by radiation induces a tumor growth delay of 57.0+/-3.8 days in CD8F1 breast tumor model ^[4] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Int J Mol Sci. 2023 Sep 30, 24(19), 14786.
- J Nutr Biochem. 2023 Sep 23;109452.
- Metabolites. 2022, 12(12), 1227.
- Research Square Print. 2023 Feb 14.

See more customer validations on www.MedChemExpress.com

REFERENCES

- [1]. Cheng J, et al. TRIM21 and PHLDA3 negatively regulate the crosstalk between the PI3K/AKT pathway and PPP metabolism. Nat Commun. 2020;11(1):1880. Published 2020 Apr 20.
- [2]. Almugadam SH, et al. Influence of 6-aminonicotinamide (6AN) on Leishmania promastigotes evaluated by metabolomics: Beyond the pentose phosphate pathway. Chem Biol Interact. 2018;294:167-177.
- [3]. Tsouko E, et al. Regulation of the pentose phosphate pathway by an androgen receptor-mTOR-mediated mechanism and its role in prostate cancer cell growth. Oncogenesis. 2014;3(5):e103. Published 2014 May 26.
- [4]. Koutcher JA, et al. Effect of 6-aminonicotinamide on the pentose phosphate pathway: 31P NMR and tumor growth delay studies. Magn Reson Med. 1996;36(6):887-892.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA