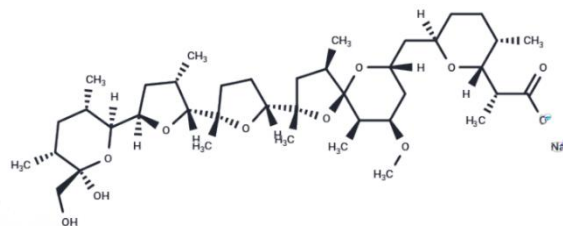


Nigericin sodium salt [28643-80-3]

#Cat: NB-64-19648-1mg	Size: 1mg
#Cat: NB-64-19648-5mg	Size: 5mg
#Cat: NB-64-19648-10mg	Size: 10mg
#Cat: NB-64-19648-25mg	Size: 25mg
#Cat: NB-64-19648-50mg	Size: 50mg
#Cat: NB-64-19648-100mg	Size: 100mg
#Cat: NB-64-19648-500mg	Size: 500mg

Chemical Properties

Cas No:	28643-80-3
Formula:	C ₄₀ H ₆₇ NaO ₁₁
Molecular weight:	746.94
Appearance:	no data available
Storage:	keep away from moisture
	Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	Nigericin sodium salt is an antibiotic, an NLRP3 activator, and a cationic ion carrier. Nigericin sodium triggers the activation of the NALP3 inflammasome, which inhibits Golgi function and suppresses the growth of Gram-positive bacteria.
Targets(IC₅₀)	Potassium Channel, NOD-like Receptor (NLR), Antibacterial, Antibiotic, NOD
In vitro	Methods: Triple-negative breast cancer cells MDA-MB-231 and 4T1 were treated with Nigericin sodium (0.25-20 µg/mL) for 24 h. The cell viability of the cells was detected by the MTS. Results: Nigericin sodium dose-dependently inhibited the cell viability of MDA-MB-231 and 4T1 cells with IC₅₀ of 2.881 µM and 2.505 µM, respectively. [1] Methods: Human lung cancer cells H460 were treated with Nigericin sodium (1 µM) for 24-48 h. Cell migration and invasion were detected by Transwell. Results: Nigericin sodium significantly inhibited the migration and invasion of H460 cells. [2]
In vivo	Methods: To detect anti-tumor activity in vivo, Nigericin sodium (2 mg/kg, subcutaneous injection every two days) and anti-PD-1 (250 µg/mouse, intraperitoneal injection once a week) were administered to BALB/c mice bearing triple-negative mammary adenocarcinoma tumor 4T1 for two weeks. Results: PD-1 antibody alone did not show significant antitumor effects, while Nigericin sodium showed moderate antitumor effects. The combination of Nigericin sodium and anti-PD-1 almost completely inhibited tumor growth. [1] Methods: To investigate the effects of aging on inflammatory vesicle function, Nigericin sodium (0.005 mg/g, 250 µL) was administered as a single intraperitoneal injection once daily for seven days to influenza virus-infected BALB/c mice. Results: Treatment with Nigericin sodium during influenza infection increased IL-1β production, increased capase-1 activity, and reduced morbidity and mortality in aged mice. During influenza virus infection, NLRP3 inflammatory vesicle activity is impaired in aged mice, and Nigericin sodium treatment rescues NLRP3 in aged hosts.[3]

Solubility Information

Solubility	DMSO: 1 mg/ml Methanol: 22.72 mg/mL (30.42 mM), Sonication is recommended. H ₂ O: 1 mg/mL (insoluble) Ethanol: 25 mg/mL (33.47 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.3388 mL	6.694 mL	13.388 mL
5 mM	0.2678 mL	1.3388 mL	2.6776 mL
10 mM	0.1339 mL	0.6694 mL	1.3388 mL
50 mM	0.0268 mL	0.1339 mL	0.2678 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.

Reference

Wu L, et al. Nigericin Boosts Anti-Tumor Immune Response via Inducing Pyroptosis in Triple-Negative Breast Cancer. *Cancers (Basel)*. 2023 Jun 16;15(12):3221.
Ju X, Zhu Y, Wang Y, et al. A novel cell culture system