Data Sheet (Cat.No.T1678)

TargetMol

Nystatin

Chemical Properties

CAS No. : 1400-61-9

Formula:

Molecular Weight:

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Nystatin (Fungicidin) is a topical and oral antifungal agent with activity against many species of yeast and candida albicans, which is used largely to treat skin and oropharyngeal candidiasis.
Targets(IC50)	Apoptosis,Antibiotic,Antifungal
In vitro	**METHODS**: Hippocampal neurons were treated with Nystatin (2.5-25 μM) for 30 min and cell morphology was examined. **RESULTS**: Acute incubation with different concentrations of Nystatin increased the growth cone size of hippocampal neurons. [1] **METHODS**: CHO cells were treated with Nystatin (100-300 μmol/L) for 10-60 min, and cell viability was measured by MST-1 assay. **RESULTS**: Cell viability studies after Nystatin application showed significant concentration- and time-dependent effects. At Nystatin concentrations equal to 100 μmol/L, the percentage of viable cells was significantly higher compared to higher concentrations. [2]
In vivo	Nystatin combined with endostatin selectively enhances endostatin uptake and biodistribution in tumor blood vessels and tumor tissues rather than in normal tissues of tumor-bearing mice, ultimately leading to elevated antiangiogenic and antitumor efficacies of endostatin in vivo[3]. Liposomal Nystatin, at doses as low as 2 mg/kg of body weight/day, protects neutropenic mice against Aspergillus-induced death in a statistically significant manner at the 50-day time point compared to either the no-treatment, the saline, or the empty-liposome group[4].

Solubility Information

Solubility	DMSO: 50 mg/mL,Sonication is recommended. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL,Suspension. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Reference

Roselló-Busquets C, et al. Nystatin Regulates Axonal Extension and Regeneration by Modifying the Levels of Nitric Oxide. Front Mol Neurosci. 2020 Apr 3;13:56.
Qin S, Wang X, Han P, et al. LRP1-Mediated Endocytosis May Be the Main Reason for the Difference in Cytotoxicity of Curcin and Curcin C on U2OS Osteosarcoma Cells. Toxins. 2022, 14(11): 771.
Zemljič Jokhadar Š, et al. Osmotic Effects Induced by Pore-Forming Agent Nystatin: From Lipid Vesicles to the Cell. PLoS One. 2016 Oct 27;11(10):e0165098.
Wei Y, Ma L, Zhang L, et al. Noncovalent interaction-assisted drug delivery system with highly efficient uptake and release of paclitaxel for anticancer therapy. International journal of nanomedicine. 2017 Sep 25;12:7039-7051.
Li X, Tang H, Huang X, et al. Rigidity-Dependent Placental Cells Uptake of Silk-Based Microcapsules. Macromolecular bioscience. 2019: 1900105.
Chen Y, et al. Cholesterol sequestration by nystatin enhances the uptake and activity of endostatin in endothelium via regulating distinct endocytic pathways. Blood. 2011 Jun 9;117(23):6392-403.
Yang C, Xu H, Yang D, et al.A renal YY1-KIM1-DR5 axis regulates the progression of acute kidney injury.Nature Communications.2023, 14(1): 4261.
Wallace TL, et al. Activity of liposomal nystatin against disseminated Aspergillus fumigatus infection in neutropenic mice. Antimicrob Agents Chemother. 1997 Oct;41(10):2238-43.
Li X, Tang H, Huang X, et al. Rigidity-Dependent Placental Cells Uptake of Silk-Based Microcapsules[J]. Macromolecular bioscience. 2019: 1900105.
Wei Y, Ma L, Zhang L, et al. Noncovalent interaction-assisted drug delivery system with highly efficient uptake and release of paclitaxel for anticancer therapy[J]. International journal of nanomedicine. 2017 Sep 25;12:7039-7051.