

# Product data sheet



MedKoo Cat#: 584297 Name: Nylidrin CAS: 447-41-6 Chemical Formula: C <sub>19</sub> H <sub>25</sub> NO <sub>2</sub> Exact Mass: 299.1885 Molecular Weight: 299.414	
Product supplied as: Powder	
Purity (by HPLC): ≥ 98%	
Shipping conditions: Ambient temperature	
Storage conditions: Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.	

## 1. Product description:

Nylidrin is a beta-adrenergic agonist. Nylidrin causes peripheral vasodilation, a positive inotropic effect, and increased gastric volume of gastric juice. It is used in the treatment of peripheral vascular disorders and premature labor.

## 2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

## 3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMF	30.0	100.0
DMSO	30.0	100.0
DMSO:PBS (pH 7.2) (1:7)	0.12	0.40

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.34 mL	16.70 mL	33.40 mL
5 mM	0.67 mL	3.34 mL	6.68 mL
10 mM	0.33 mL	1.67 mL	3.34 mL
50 mM	0.07 mL	0.33 mL	0.67 mL

## 5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of "Calculator"

## 6. Recommended literature which reported protocols for in vitro and in vivo study

### In vitro study

- Coutts SM, Khandwala A, Weinryb I. Antiallergic activity of nylidrin hydrochloride (RHC 3432-A). II. A lack of correlation between inhibition of mediator release and levels of cyclic AMP. *Int Arch Allergy Appl Immunol.* 1983;70(4):303-10. PMID: 6186609.
- Khandwala A, Coutts SM, Weinryb I. Antiallergic activity of nylidrin hydrochloride (RHC 3432-A). I. Effect on release of histamine in vitro from rat peritoneal mast cells, guinea pig lung slices and human basophils. *Int Arch Allergy Appl Immunol.* 1983;70(4):295-302. PMID: 6186608.

### In vivo study

- Jang Y, Shin JS, Lee JY, Shin H, Kim SJ, Kim M. In Vitro and In Vivo Antiviral Activity of Nylidrin by Targeting the Hemagglutinin 2-Mediated Membrane Fusion of Influenza A Virus. *Viruses.* 2020 May 25;12(5):581. doi: 10.3390/v12050581. PMID: 32466302; PMCID: PMC7290441.

## 7. Bioactivity

Biological target:

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Nylidrin is a beta-adrenergic agonist.

## In vitro activity

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Nylidrin-induced elevation of cellular cAMP in purified rat mast cells shows no correlation with nylidrin-induced inhibition of histamine release. Thus, nylidrin hydrochloride inhibits release of histamine from mast cells by a novel, non-adrenergic mechanism, which is not dependent on increased levels of cAMP.

Reference: Int Arch Allergy Appl Immunol. 1983;70(4):303-10. <https://pubmed.ncbi.nlm.nih.gov/6186609/>

## In vivo activity

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Body weight changes and survival rates confirmed that nylidrin not only mitigated body weight loss induced by viral infection (Figure 5A), but also prevented mortality: complete survival (100%) was comparable to that in the OSV-P-treated group (Figure 5B). In contrast, mice infected with the vehicle-treated maPR8 died between days 9 and 11. Taken together, these findings suggest that nylidrin protects mice from viral infection in vivo by directly targeting the HA2 function of influenza A virus (H1N1).

Reference: Viruses. 2020 May 25;12(5):581. <https://pubmed.ncbi.nlm.nih.gov/32466302/>

*Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.*