

Product data sheet



MedKoo Cat#: 574183 Name: Nybomycin CAS: 30408-30-1 Chemical Formula: C ₁₆ H ₁₄ N ₂ O ₄ Exact Mass: 298.0954 Molecular Weight: 298.298	
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:

Nybomycin is a fungal metabolite with antibacterial activity. It is active against *B. subtilis*, *B. cereus*, *B. mycoides*, *M. smegmatis*, and *K. pneumoniae*. Nybomycin is also active against *M. tuberculosis* and *M. bovis*.

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
TBD	TBD	TBD

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.35 mL	16.76 mL	33.52 mL
5 mM	0.67 mL	3.35 mL	6.70 mL
10 mM	0.34 mL	1.68 mL	3.35 mL
50 mM	0.07 mL	0.34 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

- Shiriaev DI, Sofronova AA, Berdnikov EA, Lukianov DA, Komarova ES, Marina VI, Zakalyukina YV, Biryukov MV, Maviza TP, Ivanenkov YA, Sergiev PV, Osterman IA, Dontsova OA. Nybomycin inhibits both types of *E. coli* DNA gyrase - fluoroquinolone-sensitive and fluoroquinolone-resistant. *Antimicrob Agents Chemother.* 2023 May 1;95(5):e00777-20. doi: 10.1128/AAC.00777-20. Epub 2021 Feb 16. PMID: 33593838; PMCID: PMC8092900.
- Arai M, Kamiya K, Pruksakorn P, Sumii Y, Kotoku N, Joubert JP, Moodley P, Han C, Shin D, Kobayashi M. Anti-dormant mycobacterial activity and target analysis of nybomycin produced by a marine-derived *Streptomyces* sp. *Bioorg Med Chem.* 2015 Jul 1;23(13):3534-41. doi: 10.1016/j.bmc.2015.04.033. Epub 2015 Apr 17. PMID: 25934225.

In vivo study

TBD

7. Bioactivity

Biological target:

Nybomycin, an antibiotic, exhibits antiphage and antibacterial properties.

In vitro activity

Product data sheet



Compound 1 (nybomycin) showed anti-microbial activity against Mycobacterium smegmatis and Mycobacterium bovis BCG with the MIC of 1.0µg/mL under both actively growing aerobic conditions and dormancy inducing hypoxic conditions. Compound 1 is also effective to Mycobacterium tuberculosis including the clinically isolated strains.

Reference: Bioorg Med Chem. 2015 Jul 1;23(13):3534-41. <https://pubmed.ncbi.nlm.nih.gov/25934225/>

In vivo activity

TBD

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.