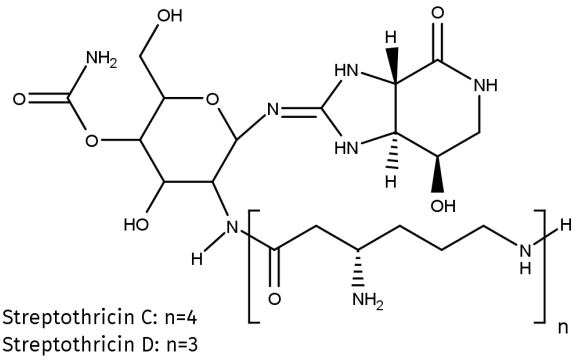
DATA SHEET

Jena Bioscience

Nourseothricin - Powder

NTC or clonNAT
powder (non-sterile)

Cat. No.	Amount
AB-102L	1 g
AB-102XL	5 g
AB-102-25G	25 g
AB-102-100G	100 g



Streptothricin C: n=4
Streptothricin D: n=3
Streptothricin E: n=2
Streptothricin F: n=1

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Shipping: Shipped at ambient temperature

Storage Conditions: Store at 4 °C

Shelf Life: 36 months

Molecular Formula: $C_{19}H_{34}N_8O_8 \cdot H_2SO_4$ (Streptothricin F)

Molecular Weight: 600.6 g/mol (Streptothricin F)

CAS#: 96736-11-7

Form: Non-sterile powder

Color: beige

Solubility: 1000 g/l in water

Description:
Nourseothricin is a mixture of Streptothricins C, D, E and F and can be used as selection antibiotic for a broad spectrum of pro- and eukaryotic organisms (i.e. Gram-positive and Gram-negative bacteria, yeast, filamentous fungi, protozoa, microalgae, plants and many more).
Selection of recombinant strains is based on inactivation of Nourseothricin by mono-acetylation of the ß-amino group of the ß-lysine residue by Nourseothricin N-acetyltransferase, the product of the *sat1* or *nat1* genes.

Selection:
For selection of recombinant *Leishmania* strains Nourseothricin (NTC) is added to growth medium to a final concentration of 100 µg/ml.

For selection of other species please refer to the product page.

Selected References:

[1] Goldstein *et al.* (1999) Three New Dominant Drug Resistance Cassettes for Gene Disruption in Saccharomyces cerevisiae. *Yeast* **15:** 1541

[2] Kojic *et al.* (2000) Shuttle vectors for genetic manipulations in Ustilago maydis. *Can. J. Microbiology* **46:** 333

[3] Werner *et al.* (2001) Aminoglycoside-Streptothricin Resistance Gene Cluster aadE–sat4–aphA-3 Disseminated among multiresistant Isolates of Enterococcus faecium. *Antimicrob. Agents Chemotherapy* **45:** 3267

[4] Hoff *et al.* (2009) Homologous recombination in the antibiotic producer Penicillium chrysogenum: strain ΔPcku70 shows up-regulation of genes from the HOG pathway. *Appl. Microbiol. Biotechnol.* **85:**1081

[5] Kochupurakkal & Iglehart (2013) Nourseothricin N-Acetyl Transferase: A Positive Selection Marker for Mammalian Cells. *PLoS One* **8:** e68509

[6] Ramos *et al.* (2013) Functional genomics tools to decipher the pathogenicity mechanisms of the necrotrophic fungus Plectosphaerella cucumerina in Arabidopsis thaliana. *Molecular Plant Pathology* **14:** 44

[7] Schubert *et al.* (2013) Agrobacterium-mediated transformation of the white-rot fungus Physisporinus vitreus. *J. Microbiol. Meth.* **95:** 251

[8] Buhmann *et al.* (2014) A Tyrosine-Rich Cell Surface Protein in the Diatom Amphora coffeaeformis Identified through Transcriptome Analysis and Genetic Transformation. *PLOS one* **9:** e110369

[9] Kraeva *et al.* (2015) Leptomonas seymouri: Adaptations to the Dixenous Life Cycle Analyzed by Sequencing, Transcriptome Profiling and Co-infection with Leishmania donovani. *PLOS Pathogens* **11:** e1005127

[10] Paschke *et al.* (2018) Rapid and efficient genetic engineering of both wild type and axenic strains of Dictyostelium discoideum. *PLoS One* **13:** e0196809