
Product Data Sheet

Product Name: Nourseothricin (sulfate)

Cat. No.: GC13632

Chemical Properties

Cas. No. 96736-11-7

Chemical Name nourseothricin, monosulfate

SMILES O[C@@H]1[C@@H](OC(N)=O)[C@@H](CO)O[C@@H](NC2=N[C@@]3([H])[C@](C(NC[C@H]3O)=O)([H])N2)[C@@H]1NC(C[C@@H](N)CCCN[H])=O.O=S(O)(O)=O

Formula $C_{31}H_{58}N_{12}O_{10} \cdot C_{19}H_{34}N_8O_8 \cdot H_2SO_4$ M.Wt 1359.5Solubility $\leq 10\text{mg/ml}$ in PBS, pH 7.2 Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure

Background

Nourseothricin is a broad-spectrum antibiotic.

Nourseothricin is a broad-spectrum antibiotic derived from *Streptomyces noursei*.

In vitro: Nourseothricin, represents a mixture of streptothricins, mainly D and F. Although very slowly, nourseothricin was found to be able to pass the outer membrane through the porin pores. It has been also shown that nourseothricin was able to generate some channels into the outer membrane. Moreover, resistant strains containing a streptothricin-inactivating acetyl transferase exhibited an additional protecting system, namely a reduced penetrability of the outer membrane. In addition, such strains indeed could be rendered sensitive via damaging the barrier function of the outer membrane [1].

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

In vivo: Animal study showed that nourseothricin was preferentially excreted via kidney and signs of nephrotoxicity could be seen. Renal handling of nourseothricin was characterized on renal cortical slices under various experimental conditions. Following administration the renal tubular transport system for organic anions was not influenced by nourseothricin. There was a high degree of accumulation of nourseothricin in renal cortical slices. In contrast to PAH accumulation, there was no influence of nitrogen atmosphere, probenecid or trishydroxyaminomethane on nourseothricin accumulation. Age dependent differences in nourseothricin accumulation did not exist [2].

Clinical trial: So far, no clinical study has been conducted.

References:

- [1] Seltmann G. Resistance of Escherichia coli to nourseothricin (streptothricin): sensitization of resistant strains by abolition of its outer membrane resistance. Zentralbl Bakteriologie. 1992 Jan;276(2):143-51.
- [2] Brunlich H, Hoffmann H, Bocker H. Renal handling of nourseothricin. Pharmazie. 1988 Mar;43(3):200-2.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA