

## PRODUCT DATA SHEET

Code No.: BIA-T1610

Pack sizes: 25 mg, 100 mg

Synonyms : Bactralycin, Dermotricine

Specifications

**Tyrothricin** 

CAS # : 1404-88-2

Molecular Formula : C<sub>66</sub>H<sub>87</sub>N<sub>13</sub>O<sub>13</sub> (for Tyrocidine A (80%))

Molecular Weight : 1269.7

Source : Bacillus brevis

Appearance : White soid

Purity : >95% composite purity (based on 80% tyrocidine and 20% Gramicidin

complexes)

Long Term Storage : -20°C

Solubility : Soluble in ethanol, methanol, DMF or DMSO.

## **Application Notes**

Tyrothricin is a complex of two unrelated peptide families, gramicidin complex and tyrocidines complex, produced by Bacillus brevis and discovered by Dubos in 1939. Typically, tyrothricin is composed of 20% of the linear pentadecylpeptide gramicidins and 80% of cyclic decapeptide tyrocidines. Both the gramicidins and tyrocidines act by disrupting bacterial cell wall integrity, but by differing mechanisms. Tyrothricin is used clinically for bacterial skin infections in some countries.

## References

- 1. Studies on a bacterial agent extracted from a soil bacillus. Dubos R.J. J. Exp. Med. 1939, 70, 11.
- 2. The isolation of bacterial substances from cultures of Bacillus brevis. Hotchkiss R.D. & Dubos R.J. J. Biol. Chem. 1941, 141, 155.
- 3. The amino acid composition of tyrocidine. Gordon A.H. et al. Biochem. J. 1943, 37, 313.
- 4. Gramicidin A. I. Determination of composition and amino acid configuration by enzymatic and gas chromatographic methods. Ishii S-I. & Witkop B. J. Am. Chem. Soc. 1963, 85, 1832.
- 5. Gramicidin channels and pores. Wallace B.A. Ann. Rev. Biophys. Biophysical Chem.1990, 19, 127.

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