Mupirocin pure USP

Pseudomonic acid
Product No. A4718

Description

This antibiotic is derived from *Pseudomonas fluorescens,* it shows high activity against gram-positive staphylococci and streptococci. Mupirocin acts as protein synthesis inhibitor by targeting the isoleucyl-tRNA synthetase (1); mupirocin mimics isoleucyl-adenylate. Discovered in 1971 (2) pseudomonic acid A is used in the clinic as a topical disinfectant and antibiotic. Due to the clinical importance of mupirocin (a mixture of pseudomonic acids containing 90% pseudomonic acid A (3)), the biology and medicine of the pseudomonic acids has been extensively reviewed (4, 5).
Crystalline Mupirocin is only very slightly soluble in water. The white solid is freely soluble in aceton, ethanol, methanol, and chloroform.

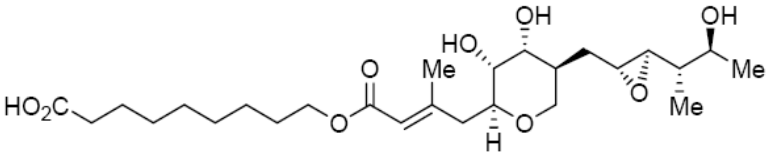

Fig.: pseudomonic acid A, the main component of naturally occurring mupirocin.

Formula	$C_{26}H_{44}O_9$
M	500.62 g/mol

Storage RT

Specification

Assay (cal. on dried subst.)	920 - 1020 µg/mg
Identity (IR)	complies
Crystallinity	complies
pH (25°C)	3.5 - 4.5
Water (K.F.)	max. 1 %

References

(1) Thomas CM, Hothersall J, Willis CL, Simpson TJ. (2010). *Nat Rev Microbiol* **8** (4):281-9.
(2) Fuller AT, Mellows G, Woolford M, Banks GT, Barrow KD, Chain EB (1971) *Nature* **234**:416–417
(3) Nicolaou KC, Chen JS, Edmonds DJ, Estrada AA (2009) *Angew Chem Int Ed Engl.*; **48** (4): 660–719
(4) Ward A, Campoli-Richards DM. (1986) *Drugs* **32**:425–444
(5) Casewell, M. W., and R. L. R. Hill. (1987) *J. Antimicrob.Chemother*. **19**:1-5.