

Product Data Sheet

Product Name: Pleuromutilin

Cat. No.: GC13368

Chemical Properties

Cas. No. 125-65-5

Chemical Name 2-hydroxy-acetic acid-(3aS,4R,5S,6S,8R,9R,9aR,10R)-6-ethenyldecahydro-5-hydroxy-4,6,9,10-tetramethyl-1-oxo-3a,9-propano-3aH-cyclopentacycloocten-8-yl ester

SMILES O=C1CCC2(CC[C@H]3C)[C@@H](C)[C@H](O)[C@@](C=C)(C)C[C@@H](OC(CO)=O)C3(C)[C@@]21[H]

Formula C₂₂H₃₄O₅

M.Wt 378.5

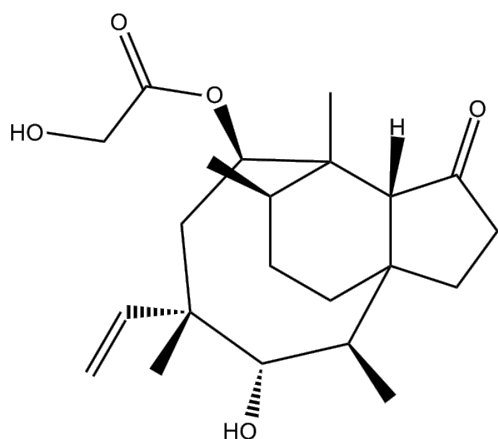
Solubility ≤50mg/ml in ethanol; 25mg/ml in DMSO; 30mg/ml in dimethyl formamide

Storage Store at 4°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

Pleuromutilin is a diterpene antibiotic derived from the basidiomycete fungus, *Clitopilus passeckerianus* [1][2].

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

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Pleuromutilin is a biologically active compound produced by *Clitopilus passeckerianus*, *Drosophila subatrata*, *Clitopilus scyphoides* (*Pleurotus mutilus*), and several other species of the genus *Clitopilus*. Pleuromutilin is a tricyclic diterpene that against gram-positive bacteria, such as *Staphylococcus aureus*, *Streptococcus haemolyticus*, and *Bacillus subtilis*. tiamulin and valnemulin, the derivatives of pleuromutilin, are used in veterinary medicine to treat swine dysentery and enzootic pneumonia. A novel semisynthetic pleuromutilin, retapamulin, is active against *Staphylococcus aureus* and *Streptococcus pyogenes* and is the first pleuromutilin derivative formulated as a topical antibacterial agent for treating human skin infections [1].

Pleuromutilin is a diterpene antibiotic that inhibits bacterial protein synthesis by binding to bacterial ribosomes in the peptidyl transferase center of the 50S subunit and inhibiting peptide bond formation [2].

References:

- [1]. Kilaru S, Collins CM, Hartley AJ, et al. Establishing molecular tools for genetic manipulation of the pleuromutilin-producing fungus *Clitopilus passeckerianus*. *Appl Environ Microbiol*. 2009 Nov;75(22):7196-204.
- [2]. Long KS, Hansen LH, Jakobsen L, et al. Interaction of pleuromutilin derivatives with the ribosomal peptidyl transferase center. *Antimicrob Agents Chemother*. 2006 Apr;50(4):1458-62.

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