Data Sheet (Cat.No.TN3710)

TargetMol
A DRUG SCREENING EXPERT

Coronarin E

Chemical Properties

CAS No.:	117591-81-8
Formula:	C20H28O
Molecular Weight:	284.4
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Coronarin E exhibits weak antimicrobial activity.
Targets(IC_{50})	Antifection: None
In vitro	The objective of the present study was to isolate and determine diterpene compound and essential oils from Hedychium roxburghii Blume rhizome and investigated those antimicrobial activities. METHODS AND RESULTS:The essential oils were obtained by steam distillation method, the residual was then extracted by reflux with ethanol. The content of essential oils was analyzed by gas chromatography-mass spectrometry (GC/MS) method. Ethanolic residual-distillation extract was concentrated then used to isolate compound 1 by vacuum liquid chromatography and centrifugal chromatography. It was characterized by infrared spectrophotometry, 1H-nuclear magnetic resonance (NMR), 13C-NMR, heteronuclear single quantum coherence-NMR, heteronuclear multiple bond correlation-NMR and carbon coupling 13C-NMR. The antimicrobial activity of essential oils, ethanolic residual-distillation extract and compound 1 were carried out by microdilution method. The oils exhibited antimicrobial activity against Bacillus subtilis American Type Culture Collection (ATCC) 6633 (minimum inhibitory concentration [MIC] 1750 μg/ml), Staphylococcus aureus ATCC 6538 (MIC 1750 μg/ml), Escherichia coli ATCC 8939 (MIC 3500 μg/ml), Pseudomonas aeruginosa ATCC 9027 (>3500 μg/ml) and Candida albicans ATCC 10231 (MIC 875 μg/ml). A phytochemical study of the rhizome essential oils of H. roxburghii Blume were performed by GC/MS and the result showed that fenchyl acetate (45.85%) was the main component of the oils. Compound 1 was identified as diterpene compound, Coronarin E. Coronarin E have not exhibited MIC at 512 μg/ml, however, it showed inhibition profile against all of tested microbes. CONCLUSIONS:The essential oils and ethanolic residual-distillation extract of H. roxburghii Blume rhizome exhibited weak antimicrobial profile. Compound 1 was identified as diterpene compound, (Coronarin E), it was exhibited weak antimicrobial activity, but showed inhibition profile against all of the tested microbes.

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.516 mL	17.581 mL	35.162 mL
5 mM	0.703 mL	3.516 mL	7.032 mL
10 mM	0.352 mL	1.758 mL	3.516 mL
50 mM	0.070 mL	0.352 mL	0.703 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Chemical composition and antimicrobial activity of diterpene and essential oils of hedychium roxburghii blume rhizome. Asian J. Pharm. Clin. Res., 2015, 8(5):221-6.

Tel:781-999-4286 E-mail:info@targetmol.com Address:36 Washington Street,Wellesley Hills,MA 02481