Data Sheet (Cat.No.TN3580)

TargetMol
A DRUG SCREENING EXPERT

Cannabispirol

Chemical Properties

CAS No.:	64052-90-0
Formula:	C15H20O3
Molecular Weight:	248.32
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Cannabispirol has a weak antibacterial effect which is more definite on plasmid carrying bacteria than plasmidless ones, and inhibits intercellular plasmid transfer and transforming activity of plasmid DNA.
Targets(IC_{50})	Antifection: None
In vitro	Some cannabispiro compounds and tetrahydrocannabidiolic acid were tested for antibacterial plasmid curing activity and inhibition of plasmid transfer. METHODS AND RESULTS: MIC values of the compound were above 1500 micrograms/ml. Cannabispirol and tetrahydrocannabidiolic acid eliminated the F'lac plasmid from Escherichia coli, but acetylCannabispirol, cannabispirone and cannabispirenone were ineffective as curing agents. Each compound, except acetyl-Cannabispirol, selectively killed plasmid carrying bacteria. The compounds inhibited R144 plasmid transfer from E. coli into E. coli cells via inhibition of mating pair formation, zygotic killing and inhibition of transconjugal DNA synthesis in a lesser extent. All of the cannabispiro compounds and tetrahydrocannabidiolic acid inhibited the transformation with pBR322 plasmid DNA when the bacteria were pretreated with the compounds, via inhibition of the DNA penetration or decreasing the synthesis of plasmid DNA during bacterial growth. CONCLUSIONS: Although each of the compounds, except acetyl-Cannabispirol, had a weak antibacterial effect which was more definite on plasmid carrying bacteria than plasmidless ones, and inhibited intercellular plasmid transfer and transforming activity of plasmid DNA, only two of them were able to cure F'lac plasmid showing that plasmid elimination is a complex process which strictly depends on the stereochemical configuration of curing agents.

Solubility Information

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

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.027 mL	20.135 mL	40.271 mL
5 mM	0.805 mL	4.027 mL	8.054 mL
10 mM	0.403 mL	2.014 mL	4.027 mL
50 mM	0.081 mL	0.403 mL	0.805 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. The effects of cannabispiro compounds and tetrahydrocannabidiolic acid on the plasmid transfer and maintenance in Escherichia coli. Acta Microbiol Hung. 1986;33(3):221-31.

2. Membrane associated antitumor effects of crocine-, ginsenoside- and cannabinoid derivates. Anticancer Res. 2000 Mar-Apr;20(2A):861-7.

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