Data Sheet (Cat.No.TN3077)

TargetMol
A DRUG SCREENING EXPERT

5,5'-Dimethoxylariciresinol 4-O-glucoside

Chemical Properties

CAS No.:	154418-16-3
Formula:	C28H38O13
Molecular Weight:	582.6
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	5,5'-Dimethoxylariciresinol-4'-O-beta-D-glucoside is shown to effectively enhance chemosensitivity of resistant cells, which makes it may be a suitable candidate for potential multidrug resistance (MDR)-reversing agents.
Targets(IC_{50})	Others: None
In vitro	The objective of this study was to investigate the reversal effects of 5,5'-dimethoxylariciresinol-4'-O-β-D-glucoside (5,5'-Dimethoxylariciresinol 4-O-glucoside,DMAG) extracted from traditional Chinese medicines Mahonia on multidrug resistance (MDR) of human leukemia cells to chemotherapeutic agents. METHODS AND RESULTS: MTT(3-(4,5-Dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide) assay was performed to determine the effect of DMAG on doxorubicin sensitivity to K562/DOX cells. Propidium iodide /Hoechst 33342 double staining assay was used to investigate the effect of DMAG on doxorubicin-induced cellular apoptosis. Intracellular accumulation of doxorubicin and rhodamine 123 assay were performed to evaluate the effect of DMAG on drugs efflux activity of P-glycoprotein.DMAG significantly enhanced the doxorubicin cytotoxicity to K562/DOX cells. In the presence of 1.0 μM of DMAG, the IC50 of doxorubicin decreased from 34.93 ± 1.37 μM to 12.51 ± 1.28 μM. DMAG of 1.0 μM significantly enhanced doxorubicin-induced cell apoptosis in K562/DOX cells and the enhancement was time-dependent. A significant increase in accumulation of doxorubicin in the presence of DMAG was observed. After treatment of the K562/DOX cells for 1 h with 15.0 μM doxorubicin alone, the fluorescence intensity was 33093.12. With the addition of 1.0 μM of DMAG, the fluorescence intensity of doxorubicin was 2.3-fold higher. A significant increase of accumulation of rhodamine 123 in the presence of DMAG was also observed. With the addition of 1.0 μM of DMAG, the fluorescence intensity was increased by 49.11% compared with rhodamine 123 alone. CONCLUSIONS: DMAG was shown to effectively enhance chemosensitivity of resistant cells, which makes it might be a suitable candidate for potential MDR-reversing agents.

Solubility Information

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

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.716 mL	8.582 mL	17.164 mL
5 mM	0.343 mL	1.716 mL	3.433 mL
10 mM	0.172 mL	0.858 mL	1.716 mL
50 mM	0.034 mL	0.172 mL	0.343 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. Reversal of multidrug resistance by 5,5'-dimethoxylariciresinol-4-O-β-D-glucoside in doxorubicin-resistant human leukemia K562/DOX. Indian J. Pharmacol.,2013,45(6):597-602.

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