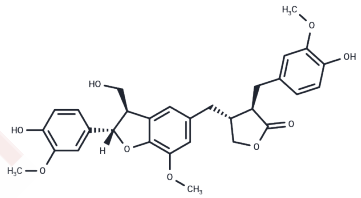
Data Sheet (Cat.No.TN1072)

TargetMol

Lappaol A

Chemical Properties



CAS No. : 62333-08-8

Formula: C30H32O9

Molecular Weight: 536.57

Storage: Store at low temperature,Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Lappaol A has antioxidant and antiaging properties, it may promote the C. elegans longevity and stress resistance through a JNK-1-DAF-16 cascade. Lappaol A also has potential chemosensitizing activity, it may be candidates for developing novel adjuvant anticancer agents.
Targets(IC50)	JNK,P-gp
In vitro	In this study, we isolated six lignans from A. lappa seeds, namely arctigenin, matairesinol, arctiin, (iso)Lappaol A, lappaol C, and lappaol F. The MDR reversal potential of the isolated lignans and the underlying mechanism of action were studied using two MDR cancer cell lines, CaCo2 and CEM/ADR 5000 which overexpress P-gp and other ABC transporters. In two-drug combinations of lignans with the cytotoxic doxorubicin, all lignans exhibited synergistic effects in CaCo2 cells and matairesinol, arctiin, lappaol C and lappaol F display synergistic activity in CEM/ADR 5000 cells. Additionally, in three-drug combinations of lignans with the saponin digitonin and doxorubicin MDR reversal activity was even stronger enhanced. The lignans can increase the retention of the P-gp substrate rhodamine 123 in CEM/ADR 5000 cells, indicating that lignans can inhibit the activity of P-gp.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8637 mL	9.3184 mL	18.6369 mL
5 mM	0.3727 mL	1.8637 mL	3.7274 mL
10 mM	0.1864 mL	0.9318 mL	1.8637 mL
50 mM	0.0373 mL	0.1864 mL	0.3727 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Natural lignans from Arctium lappa modulate P-glycoprotein efflux function in multidrug resistant cancer cells. Phytomedicine. 2015 Feb 15;22(2):301-7.