Data Sheet (Cat.No.TN3619)

TargetMol
A DRUG SCREENING EXPERT

Cedrusin

Chemical Properties

CAS No.:	75775-36-9
Formula:	C19H22O6
Molecular Weight:	346.4
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Cedrusin shows a cytotoxic effect on A375 and HeLa cells.
Targets(IC_{50})	Caspase: None PARP: None
In vitro	Hazelnut shells, a by-product of the kernel industry processing, are reported to contain high amount of polyphenols. However, studies on the chemical composition and potential effects on human health are lacking. METHODS AND RESULTS: A methanol hazelnut shells extract was prepared and dried. Our investigation allowed the isolation and characterization of different classes of phenolic compounds, including neolignans, and a diarylheptanoid, which contribute to a high total polyphenol content (193.8 ± 3.6 mg of gallic acid equivalents (GAE)/g of extract). Neolignans, lawsonicin and Cedrusin, a cyclic diarylheptanoid, carpinontriol B, and two phenol derivatives, C-veratroylglycol, and β-hydroxypropiovanillone, were the main components of the extract (0.71%-2.93%, w/w). The biological assays suggested that the extract could be useful as a functional ingredient in food technology and pharmaceutical industry showing an in vitro scavenging activity against the radical 1,1-diphenyl-2-picrylhydrazyl radical (DPPH) (EC50 = 31.7 μg/mL with respect to α-tocopherol EC50 = 10.1 μg/mL), and an inhibitory effect on the growth of human cancer cell lines A375, SK-Mel-28 and HeLa (IC50 = 584, 459, and 526 μg/mL, respectively). CONCLUSIONS: The expression of cleaved forms of caspase-3 and poly(ADP-ribose) polymerase-1 (PARP-1) suggested that the extract induced apoptosis through caspase-3 activation in both human malignant melanoma (SK-Mel-28) and human cervical cancer (HeLa) cell lines. The cytotoxic activity relies on the presence of the neolignans (balanophonin), and phenol derivatives (gallic acid), showing a pro-apoptotic effect on the tested cell lines, and the neolignan, Cedrusin, with a cytotoxic effect on A375 and HeLa cells.

Solubility Information

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

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.887 mL	14.434 mL	28.868 mL
5 mM	0.577 mL	2.887 mL	5.774 mL
10 mM	0.289 mL	1.443 mL	2.887 mL
50 mM	0.058 mL	0.289 mL	0.577 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. Hazelnut (Corylus avellana L.) Shells Extract: Phenolic Composition, Antioxidant Effect and Cytotoxic Activity on Human Cancer Cell Lines. Int J Mol Sci. 2017 Feb 13;18(2). pii: E392.

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