Data Sheet (Cat.No.TN6566)

TargetMol

Licoflavanone

Chemical Properties

CAS No. : 119240-82-3

Formula: C20H20O5

Molecular Weight: 340.375

Storage: 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	Licoflavanone exhibits antioxidant and anti-inflammatory activities,it markedly decreases pro-inflammatory cytokines and cyclooxygenase 2/inducible nitric oxide synthase (COX-2/iNOS) expression levels.
Targets(IC50)	Antibacterial
In vitro	Inflammation represents an adaptive response generated by injuries or harmful stimuli. Natural remedies represent an interesting alternative to traditional therapies, involving several biochemical pathways. Besides, the valorization of agrochemical wastes nowadays seems to be a feasible way to reduce the health spending and improve the accessibility at bioactive natural compounds. METHODS AND RESULTS: In this context, the chemical composition of three Glycyrrhiza glabra L. (licorice) leaf extracts, obtained through maceration or ultrasound-assisted method (fresh and dried leaves) was investigated. A guided fractionation obtained three main components: pinocembrin, glabranin and Licoflavanone. All the extracts showed similar antioxidant properties, evaluated by 2,2'-diphenyl-1-picrylhydrazyl (DPPH) or 2,2'-azino-bis(3-ethylbenzothiazoline-6-sulfonic acid) Diammonium Salt (ABTS) assay, while, among the isolated compounds, Licoflavanone exhibited the best antioxidant activity. The anti-inflammatory activity of the extracts and the purified compounds was investigated in lipopolysaccharide (LPS)-stimulated RAW 264.7 murine macrophages. Extract C and Licoflavanone showed a good anti-inflammatory activity without affecting cell viability, as they decreased nitrite levels even when used at 12.5 μg/mL ($p < 0.005$) and 50 μM concentration ($p < 0.001$), respectively. CONCLUSIONS: Interestingly, Licoflavanone markedly decreased pro-inflammatory cytokines and cyclooxygenase 2/inducible nitric oxide synthase (COX-2/iNOS) expression levels ($p < 0.001$). A modulation of nuclear factor kappa B/mitogen-activated protein kinases (NF-kB/MAPK) pathway underlay such behavior, highlighting the potential of this natural compound as a new scaffold in anti-inflammatory drug research.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.9379 mL	14.6895 mL	29.3789 mL
5 mM	0.5876 mL	2.9379 mL	5.8758 mL
10 mM	0.2938 mL	1.4689 mL	2.9379 mL
50 mM	0.0588 mL	0.2938 mL	0.5876 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

Antioxidant and Anti-Inflammatory Activities of Flavanones from Glycyrrhiza glabra L. (licorice) Leaf Phytocomplexes: Identification of Licoflavanone as a Modulator of NF-kB/MAPK Pathway. Antioxidants (Basel). 2019 Jun 20;8(6). pii: E186.