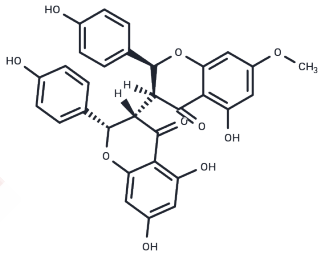
Data Sheet (Cat.No.TN6418)

TargetMol

7-Methoxyneochamaejasmine A

Chemical Properties



CAS No. : 402828-38-0

Formula: C31H24O10

Molecular Weight: 556.523

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	7-Methoxyneochamaejasmine A has a strong inhibitory effect on Festuca rubra L. and Medicago sativa seedlings.
In vitro	Populations of Stellera chamaejasme L. have been increasing constantly in recent years in some areas of the grassland in north China but why this toxic weed has become highly competitive is not clear. In order to determine if any potential allelochemicals are released into the soil environment by S. chamaejasme, we investigated the chemical composition of a water-washed solution of the living roots with rhizosphere soil. METHODS AND RESULTS:This led to the isolation and identification of seven compounds: umbelliferone (1), daphnoretin (2), chamaechromone (3), 7-Methoxyneochamaejasmine A (4), mesoneochamaejasmin A (5), neochamaejasmin B (6), dihydrodaphnodorin B (7). All are secondary metabolites of S. chamaejasme. Bioassay showed that 1, 5 and 6 had a strong inhibitory effect on Festuca rubra L. and Medicago sativa seedlings. These compounds were quantified by high performance liquid chromatography in 25 root zone soil samples of S. chamaejasme collected at altitudes between 165 and 4741 m from the northeast to the Tibetan Plateau of China. All samples contained at least one of the phytotoxic compounds. Their content did not correlate with the altitude of the growing site. However, the level of chamaechromone negatively correlated with the soil pH. CONCLUSIONS:Principle components analysis indicated that the flavonoids might come from the same source. These potential allelochemicals from root release into the soil might play an important role in the highly competitive nature and broad ecological adaptability of S. chamaejasme in the wild.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7969 mL	8.9844 mL	17.9688 mL
5 mM	0.3594 mL	1.7969 mL	3.5938 mL
10 mM	0.1797 mL	0.8984 mL	1.7969 mL
50 mM	0.0359 mL	0.1797 mL	0.3594 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

Potential allelochemicals in root zone soils of Stellera chamaejasme L. and variations at different geographical growing sites Plant Growth Regulation, 2015 , 77 (3) :335-342.