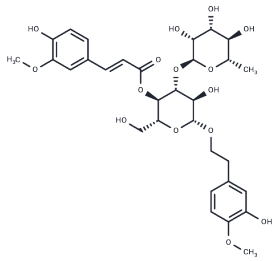
Data Sheet (Cat.No.TMA0424)

TargetMol

Martynoside

Chemical Properties



CAS No. : 67884-12-2

Formula: C31H40O15

Molecular Weight: 652.64

Storage: Keep away from moisture
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	Martynoside is an active glycoside extracted from Rehmannia, with anti-estrogen, anticancer, cytotoxic, hematopoietic, antioxidant, and anti-metastatic properties. It increases IGFBP3 levels through the ER pathway.
Targets(IC50)	Antioxidant
In vitro	Martynoside attenuated 5-FU-induced cytotoxicity of bone marrow nucleated cells, increased the stability of RPL27A protein, and reduced RPL27A ubiquitination at lys92 (K92) and lys94 (K94) sites. [1] Martynoside(50 μg/ml) protects isolated bone marrow cells from 5-fluorouracil (5-FU) -induced cell death and inflammation by down-regulating the TNF signaling pathway. [2]
In vivo	Martynoside 10 mg/kg daily and receiving exercise for 5 weeks was found to have the potential to antagonize exercise anemia, and the mechanism of this effect may be related to preventing free radical damage to red blood cells. [3]

Solubility Information

Solubility	DMSO: 16 mg/mL (24.52 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (3.06 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.5322 mL	7.6612 mL	15.3224 mL
5 mM	0.3064 mL	1.5322 mL	3.0645 mL
10 mM	0.1532 mL	0.7661 mL	1.5322 mL
50 mM	0.0306 mL	0.1532 mL	0.3064 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

Hong M, et al. Martynoside rescues 5-fluorouracil-impaired ribosome biogenesis by stabilizing RPL27A. Sci Bull (Beijing). 2023 Aug 15;68(15):1662-1677.
Hong M, et al. Ex vivo and in vivo chemoprotective activity and potential mechanism of Martynoside against 5-fluorouracil-induced bone marrow cytotoxicity. Biomed Pharmacother. 2021 Jun;138:111501.
Zhu M,et al. Anti-sports anaemia effects of verbascoside and martynoside in mice. Int J Sports Med. 2010 Aug;31 (8):537-41.