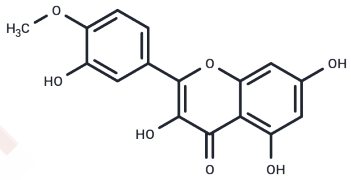
Data Sheet (Cat.No.TN1039)

TargetMol

Tamarixetin

Chemical Properties



CAS No. : 603-61-2

Formula: C16H12O7

Molecular Weight: 316.26

Storage: 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	Tamarixetin (4'-O-Methyl Quercetin) is a natural flavonoid derivative of quercetin exhibiting multi-target biological activities including anti-inflammatory, antioxidant, antitumor, neuroprotective, and cardiovascular protective effects. Tamarixetin exerts its biological activity through multiple mechanisms such as direct radical scavenging, signaling pathway regulation, enzyme inhibition, and receptor binding.
Targets(IC50)	Apoptosis,Akt,Endogenous Metabolite,Antibacterial,Protease,COX, Immunology/Inflammation related,Interleukin,JNK,p38 MAPK,ROS
In vitro	**Methods**: Add tamarixetin at concentration gradients (0, 50, 100, 150 μM) to CRC cells (HT-29, HCT-116), treat for 24 hours, and assess cell viability and proliferation using the MTT assay and EdU assay. **Results**: Tamarixetin dose-dependently inhibited CRC cell proliferation and significantly suppressed DNA synthesis. [1] **Methods**: BMDCs derived from mouse bone marrow were stimulated with LPS (100 ng/mL). Tamarixetin (50 μM) was added at different time points (0–120 min) post-LPS stimulation. Supernatants were collected and cytokines were detected by ELISA. **Results**: Tamarixetin significantly suppressed proinflammatory cytokine secretion (IL-6, TNF-α, IL-12p70) and markedly increased anti-inflammatory cytokine IL-10 secretion. [2]
In vivo	**Methods**: HCT-116 or HT-29 cells (1×10^6) were subcutaneously implanted into 4-week-old nude mice. Four days post-implantation, mice were randomly assigned to treatment groups and administered Tamarixetin (25 mg/kg) via intraperitoneal injection every other day for 14 days. **Results**: Tamarixetin significantly inhibited tumor growth in vivo. [1] **Methods**: C57BL/6 mice were administered LPS (25 mg/kg) intraperitoneally to induce endotoxin shock. The experimental group received Tamarixetin (1 mg/kg) intraperitoneally one hour prior to LPS injection as pretreatment. The control group received the solvent. **Results**: The survival rate of mice in the Tamarixetin pretreatment group increased to approximately 80%, while all mice in the control group died. [2]

Solubility Information

Solubility	DMSO: 4.4 mg/mL (13.91 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: 1 mg/mL (3.16 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	3.162 mL	15.8098 mL	31.6196 mL
5 mM	0.6324 mL	3.162 mL	6.3239 mL
10 mM	0.3162 mL	1.581 mL	3.162 mL
50 mM	0.0632 mL	0.3162 mL	0.6324 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

Ouyang P, et al. Tamarixetin Suppresses Colorectal Cancer Progression by Targeting DPP7-Mediated WNT3A/β-Catenin Signalling Pathway. J Cell Mol Med. 2025 Aug;29(16):e70787.

Zhang F, Weng N, Zhai J X, et al.Rapid Classification and Identification of Chemical Compounds and Semi-Quantitative Metabolism of Huangkui Capsules and the Protective Effects of Its Quercetin Derivatives against Tacrolimus-induced HK-cell Reduction.World Journal of Traditional Chinese Medicine.2024: 10.4103.

Park HJ, et al. Tamarixetin Exhibits Anti-inflammatory Activity and Prevents Bacterial Sepsis by Increasing IL-10 Production. J Nat Prod. 2018 Jun 22;81(6):1435-1443.