# Data Sheet (Cat.No.TN1403)

TargetMol
A DRUG SCREENING EXPERT

Arjunolic acid

## Chemical Properties

| | |
|---|---|
| CAS No.: | 465-00-9 |
| Formula: | C30H48O5 |
| Molecular Weight: | 488.7 |
| Appearance: | N/A |
| Storage: | 0-4℃ for short term (days to weeks), or -20℃ for long term (months). |

## Biological Description

| | |
|---|---|
| Description | Arjunolic acid has antioxidant, anti-inflammatory, antinociceptive and anticholinesterasic (AChE and BuChE) activities, it may as promising targets for the development of innovative multi-functional medicines for Alzheimer desease treatment. |
| Targets($IC_{50}$) | TNF-α: None<br>IL Receptor: None<br>JNK: None |
| In vitro | This review highlights the beneficial role of Arjunolic acid, a naturally occurring chiral triterpenoid saponin, in various organ pathophysiology and the underlying mechanism of its protective action. Studies on the biochemistry and pharmacology suggest the potential use of Arjunolic acid as a novel promising therapeutic strategy. WHAT THE READERS WILL GAIN: The multifunctional therapeutic application of Arjunolic acid has already been documented by its various biological functions including antioxidant, anti-fungal, anti-bacterial, anticholinesterase, antitumor, antiasthmatic, wound healing and insect growth inhibitor activities. The scientific basis behind its therapeutic application as a cardioprotective agent in traditional medicine is justified by its ability to prevent myocardial necrosis and apoptosis, platelet aggregation, coagulation and lowering of blood pressure, heart rate, as well as cholesterol levels. Its antioxidant property coupled with metal chelating property (by its two hydroxyl groups) protects different organs from metal and drug-induced organ pathophysiology. Arjunolic acid also plays a beneficial role in the pathogenesis of diabetes and its associated complications. The mechanism of cytoprotection of Arjunolic acid, at least in part, results from the detoxification of reactive oxygen species (ROS) produced in the respective pathophysiology. In addition to its other biological functions, it also possesses vibrant insecticidal properties and it has the potential to be used as a structural molecular framework for the design of molecular receptors in the general area of supramolecular chemistry and nanochemistry. Esters of Arjunolic acid function as organogelators which has wide application in designing thermochromic switches and sensor devices. Arjunolic acid derived crown ether is an attractive candidate for the design of molecular receptors, biomimetics and supramolecular systems capable of performing some biological functions[1] |

## Solubility Information

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

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 2.046 mL | 10.231 mL | 20.462 mL |
| 5 mM | 0.409 mL | 2.046 mL | 4.092 mL |
| 10 mM | 0.205 mL | 1.023 mL | 2.046 mL |
| 50 mM | 0.041 mL | 0.205 mL | 0.409 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. Arjunolic acid: a new multifunctional therapeutic promise of alternative medicine.Biochimie. 2013 Jun;95(6):1098-109.



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