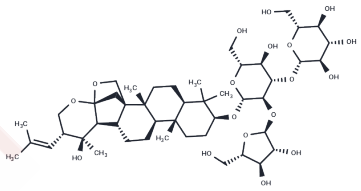
# Data Sheet (Cat.No.TN1421)

TargetMol

## Bacopaside II

### Chemical Properties



CAS No. : 382146-66-9

Formula: C47H76O18

Molecular Weight: 929.10

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

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|---|---|
| Description | Bacopaside II is a potential anti-angiogenic agent, it can reduce endothelial cell migration and tubulogenesis and induce apoptosis. |
| Targets(IC50) | Apoptosis,Aquaporin |
| In vitro | We tested the AQP1 inhibitor, Bacopaside II, derived from medicinal plant Bacopa monnieri, on endothelial cell migration and tube-formation in vitro using mouse endothelial cell lines (2H11 and 3B11) and human umbilical vein endothelial cells (HUVEC). The effect of Bacopaside II on viability, apoptosis, migration and tubulogenesis was assessed by a proliferation assay, annexin-V/propidium iodide flow cytometry, the scratch wound assay and endothelial tube-formation, respectively. Cell viability was reduced significantly for 2H11 at 15 μM ($p = 0.037$), 3B11 at 12.5 μM ($p = 0.017$) and HUVEC at 10 μM ($p < 0.0001$). At 15 μM, the reduced viability was accompanied by an increase in apoptosis of 38%, 50% and 32% for 2H11, 3B11 and HUVEC, respectively. Bacopaside II at ≥10 μM significantly reduced migration of 2H11 ($p = 0.0002$) and 3B11 ($p = 0.034$). HUVECs were most sensitive with a significant reduction at ≥7.5 μM ($p = 0.037$). Tube-formation was reduced with a 15 μM dose for all cell lines and 10 μM for 3B11 ($p < 0.0001$). |

### Solubility Information

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|---|---|
| Solubility | DMSO: 10 mM,Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |
| In vivo Formulation | 10% DMSO+90% Corn Oil: 1 mg/mL (1.08 mM),Sonication is recommended.<br>*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 | 1.0763 mL | 5.3816 mL | 10.7631 mL |
| 5 mM | 0.2153 mL | 1.0763 mL | 2.1526 mL |
| 10 mM | 0.1076 mL | 0.5382 mL | 1.0763 mL |
| 50 mM | 0.0215 mL | 0.1076 mL | 0.2153 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

The Aquaporin 1 Inhibitor Bacopaside II Reduces Endothelial Cell Migration and Tubulogenesis and Induces Apoptosis.Int J Mol Sci. 2018 Feb 26;19(3). pii: E653.
Feng J, Sun Q, Chen P, et al.Characterization of Cancer Cell Mechanics by Measuring Active Deformation Behavior. Small Methods.2023: 2300520.