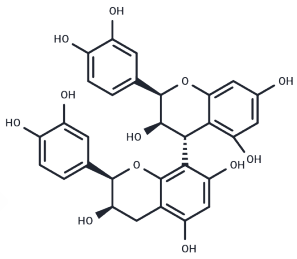
Data Sheet (Cat.No.T6S1367)

TargetMol

Procyanidin B2

Chemical Properties



CAS No. : 29106-49-8

Formula: C30H26O12

Molecular Weight: 578.52

Storage: Keep away from direct sunlight,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	Procyanidin B2 (Proanthocyanidin B2) has vascular protective, anti-diabetic nephropathy, anti-cancer, anti-inflammatory, and antioxidant activities. Procyanidin B2 inhibited NLRP3 inflammasome activation via suppression of AP-1 pathway.
Targets(IC50)	Reactive Oxygen Species,NOD,ROS
In vitro	Procyanidin B2 exerts both antioxidant and pro-oxidant properties by interacting with H2O2 and metal ions[1].
In vivo	Procyanidin B2 from cinnamon inhibited AGE accumulation in diabetic rat kidney and ameliorated AGE mediated pathogenesis of DN[2].
Animal Research	Streptozotocin-induced diabetic rats were fed with either 3% cinnamon or 0.002% Procyanidin B2(PCB2)-fraction in diet for 12weeks. Biochemical analysis of blood and urine was performed at the end of experiment. Evaluation of glomerular markers that serve as indicators of renal function was done by immunohistochemistry, immunoblotting and qRT-PCR. Supplementation of diabetic rats with cinnamon and PCB2-fraction prevented glycation mediated RBC-IgG cross-links and HbA1c accumulation in diabetes rats. Cinnamon and PCB2-fraction also inhibited the accumulation of N-carboxy methyl lysine (CML), a prominent AGE in diabetic kidney[2].

Solubility Information

Solubility	H2O: 50 mg/mL (86.43 mM) DMSO: 83.33 mg/mL (144.04 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 (3.46 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	1.7285 mL	8.6427 mL	17.2855 mL
5 mM	0.3457 mL	1.7285 mL	3.4571 mL
10 mM	0.1729 mL	0.8643 mL	1.7285 mL
50 mM	0.0346 mL	0.1729 mL	0.3457 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

Sakano K , Mizutani M , Murata M , et al. Procyanidin B2 has anti- and pro-oxidant effects on metal-mediated DNA damage[J]. Free Radical Biology & Medicine, 2005, 39(8):1041-1049.

Muthenna P , Raghu G , Kumar P A , et al. Effect of cinnamon and its procyanidin-B2 enriched fraction on diabetic nephropathy in rats[J]. Chemico-Biological Interactions, 2014, 222:68-76.