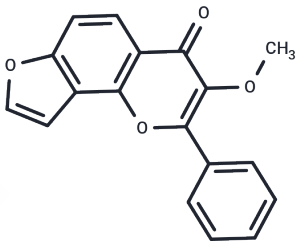
Data Sheet (Cat.No.T2S0820)

TargetMol

Karanjin

Chemical Properties



CAS No. : 521-88-0

Formula: C18H12O4

Molecular Weight: 292.29

Storage: 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	Karanjin is a flavonoid obtained from the seeds of the karanja tree.Karanjin induces GLUT4 translocation in skeletal muscle cells by increasing AMPK activity. Karanjin can induce cancer cell death through cell cycle arrest and enhance apoptosis.
Targets(IC50)	Apoptosis,NF-κB,AMPK,Cytochromes P450,Phosphatase
In vitro	Karanjin is a furanoflavonol, insecticidal and acaricidal activities.?The present study was intended to evaluate the biochemical interactions of karanjin with bovine serum albumin (BSA) and study its toxicological effects on mammalian and bacterial cell lines.? Karanjin bound to BSA at a single site with a dissociation constant of 19.7 μM.? Evaluation of BSA-karanjin interactions at three different temperatures indicated the involvement of static mode of quenching.?Binding experiments in the presence of warfarin and computational docking analysis indicated that karanjin bound closer to the warfarin binding site located in the Subdomain IIA of BSA.?Using F?rster resonance energy transfer analysis the distance between TRP 213 of BSA and karanjin was found to be 20 ?.?Collective results from synchronous fluorescence spectra analysis, differential scanning calorimetry, and circular dichroism analysis indicated that binding of karanjin induced conformational changes in the secondary structure of BSA.?Karanjin exhibited low toxicity against human cervical cancer cells and normal mouse fibroblast L929 cells and modestly inhibited the growth of B. subtilis and E. coli cells[3].

Solubility Information

Solubility	DMSO: 25 mg/mL (85.53 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.4213 mL	17.1063 mL	34.2126 mL
5 mM	0.6843 mL	3.4213 mL	6.8425 mL
10 mM	0.3421 mL	1.7106 mL	3.4213 mL
50 mM	0.0684 mL	0.3421 mL	0.6843 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

Raghav D , Mahanty S , Rathinasamy K . Biochemical and toxicological investigation of karanjin, a bio-pesticide isolated from Pongamia seed oil - ScienceDirect[J]. Pesticide Biochemistry and Physiology, 2019, 157:108-121.