Data Sheet (Cat.No.T0278)

TargetMol

Escin

Chemical Properties

CAS No. : 6805-41-0

Formula: $C_{55}H_{86}O_{24}$

Molecular Weight: 1131.27

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	Escin (Aescin) is biosynthesized from protoaescigenin and barringtogenol, occurring in the seeds of Aesculus.
Targets(IC50)	Apoptosis
In vitro	Escin is effective to inhibit pancreatic cancer cell proliferation as a single agent. However, escin has minimal effect on normal rat skeletal muscle cells. Escin potentiates the proliferation-inhibiting and apoptosis-inducing effect of gemcitabine in both BxPC-3 and PANC-1 cell lines in vitro. It also down-regulates constitutive as well as gemcitabine-induced activation of NF-kB and its downstream gene products in pancreatic cancer cells in vitro[1].
In vivo	Escin augments therapeutic effect of gemcitabine in BxPC-3 xenografts in nude mice. They have significant synergistic effects on suppressing the growth of pancreatic tumors, inhibiting the proliferation and inducing apoptosis of tumors. Escin potentiates the inhibiting effect of gemcitabine on NF-kB and NF-kB-regulated gene products in BxPC-3 xenografts in nude mice[1].
Cell Research	Cell cycle analysis: After treatment with escin (BxPC-3 (25 μM),PANC-1 (20 μM), respectively), gemcitabine (BxPC-3(100 nM), PANC-1(1 μM), respectively) or their combinations for 72 h, BxPC-3 and PANC-1 cells are collected by trypsinization, washed with ice-cold PBS and fixed overnight by the addition of 2 ml of ice-cold 70% ethanol/30% PBS at 4°C. The ethanol is subsequently removed after centrifugation, and about 1×106 cells are resuspended in 800 μl of PBS, 100 μl of ribonuclease A (500 g/ml PBS) and 100 μl of PI (500 g/ml PBS) in the dark at room temperature for 30 min. Flow cytometric analysis is performed using FACScan for the detection of the percentage of cells in the diVerent phases of the cell cycle. Cells treated with DMSO alone are used as controls. (Only for Reference)

Solubility Information

Solubility	DMSO: < 1 mg/mL (insoluble),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), Ethanol: < 1 mg/mL (insoluble or slightly soluble), (< 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 (0.88 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	0.884 mL	4.4198 mL	8.8396 mL
5 mM	0.1768 mL	0.884 mL	1.7679 mL
10 mM	0.0884 mL	0.442 mL	0.884 mL
50 mM	0.0177 mL	0.0884 mL	0.1768 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

Wang YW, et al. J Cancer Res Clin Oncol. 2012, 138(5):785-97.

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